Registered at the G.P.O., Sydney, for Transmission by Post as a Newspaper. Published Weekly.

MAR 6 1918

THE

MEDICAL JOURNAL OF AUSTRALIA

(With which "The Australasian Medical Gazette," and "The Australian Medical Journal" are incorporated.)

The Journal of the Australian Branches of the British Medical Association.

VOL. I.—5TH YEAR—No. 5. SYDNEY: SATURDAY, FEBRUARY 2, 1918. PRICE 6D.

Allen & Hanburys Ltd.

MAKERS OF

SURGICAL INSTRUMENTS

SUPPLIERS TO

H.M. ARMY and H.M. NAVY

ALL INSTRUMENTS ARE OF THE

BEST BRITISH WORKMANSHIP

AUSTRALASIAN BRANCH:

B.M.A. BUILDING, ELIZABETH STREET, SYDNEY

"GLAXO" Answers all Postulates

An ideal infant's food is one which resembles as closely as possible mother's milk. It should contain the same constituents in the same proportion and the same form and should be germ free.

GLAXO ANSWERS ALL THESE REQUIREMENTS.

By reason of its small curd, the large amount of soluble albumin present, its standardized composition and bacteriological purity, it is a far superior food to ordinary cow's milk in all conditions where a milk diet is desirable.

Cow's milk when diluted sufficiently to approximate the amount of proteid present therein to that of human milk becomes markedly deficient in fat; extra cream has to be added. Glaxo diluted 1 in 8 contains as much fat as human milk.

AND IT IS THE ONLY PREPARED FOOD WHICH DOES.

Since the total proteids in cow's milk consists of roughly nine-tenths caseinogen and one-tenth lact-albumin, and in human milk of two-thirds lact-albumin and one-third caseinogen, it would be natural to assume that the curd formed by Glaxo, in the presence of an acid, would resemble the heavy leathery casein clot. This is not so, however, for on the addition of rennin a light flocculent precipitate, resembling in every way that of Lact-albumin, results.

This is of the utmost importance, for it is this leathery casein clot which is one of the greatest drawbacks of cow's-milk feeding to the infant.

The bacteriological purity of Glaxo together with its ease of digestibility—and hence the absence of dyspeptic troubles—makes it the ideal infants' summer food; for whether summer diarrhœa be entirely a specific infection or whether the opposing view be held.

GLAXO ANSWERS ALL POSTULATES.

"BUILDS BONNIE BABIES"

Glaxo

"BUILDS BONNIE BABIES"

SAMPLES, together with Medical and Analytical Reports, SENT FREE on application to—

GLAXO .. .. 79-81 Pitt Street, Sydney.
GLAXO .. .. Box 633 G.P.O., Melbourne.
GLAXO .. .. Box 43 G.P.O., Perth, W.A.
GLAXO .. .. Box 129 G.P.O., Adelaide, S.A.
GLAXO .. .. Box 49 G.P.O., Brisbane, Q.
GLAXO .. .. Palmerston North, N. Zealand.

Ilott No. 14

Bottled by CAMWAL, Ltd., at their Spring, Harrogate, England.

Aquaperia

(HARROGATE, ENGLAND).

British Aperient Mineral Water

Supplants APENTA, HUNYADI JANOS, and other German and Austrian Waters.

Editorial Note from "Lancet," March 20, 1915:

"The Water is drawn from a Spring at Harrogate. The constituents are well balanced in accordance with Therapeutic requirements."

Sold by all Chemists

Distributing Agents: **R. E. JONES & CO.,**

Daily Telegraph Buildings - - King Street, Sydney

THE MEDICAL JOURNAL OF AUSTRALIA.

VOL. I.–5TH YEAR. SYDNEY: SATURDAY, FEBRUARY 2, 1918. No. 5.

NOTES ON MILITARY ORTHOPÆDICS.

By **Victor Hurley, M.D., Ch.M. (Melb.),**
Lieutenant-Colonel; Assistant Director Medical Services, Australian Imperial Force,
and
Hugh R. G. Poate, M.B., Ch.M. (Syd.), F.R.C.S. (Eng.),
Lieutenant-Colonel, No. 3 Australian General Hospital.

Part II.

The Military Orthopædic Hospital, Shepherd's Bush, London.

This hospital is very comfortably housed in a fine set of brick buildings, which used to be the Hammersmith District Workhouse and Infirmary, and formed an ideal military hospital ready for the taking.

There are 856 beds at present; but additions, to increase the capacity of the hospital, are contemplated. The hospital is always full, and there is a long list of patients waiting for transfers from hospitals all over Great Britain. The equipment is magnificent, and there seems to be everything that brains can devise or money buy to help in the excellent work being done.

Colonel Sir Robert Jones, C.B., Inspector of Military Orthopædics, A.M.S., takes a very active interest in the place, and we believe this is his model hospital, from the pattern of which some ten or twelve others are to be established throughout the United Kingdom. Colonel Sir Robert Jones holds a small clinic there each Thursday morning, seeing "walking cases" referred from other hospitals for his opinion, and then visits the wards, which are under the care of members of the consulting staff, most of whom are comparatively young men.

The British Red Cross Society has a very active and interested worker at this hospital in the ex-King of Portugal, who sees they lack nothing that can or should be supplied through the Red Cross. His latest activity has resulted in £4,000 being given for the building and equipping of a department of hydrotherapy. He has also been instrumental in the building and fitting of a very fine gymnasium, and it is largely due to his efforts that the curative manual workshops have been placed on such a solid basis.

One of us was very fortunate in having at this hospital an uncle, Mr. Herbert Poate, who, as a voluntary worker, takes an active interest in the workshops, of which he is virtually the superintendent. It was through him that we were able to secure a large amount of practical detail as regards the workshops.

The great feature that strikes one about this hospital, as distinct from other military hospitals, is that there is no rushing the patients out as soon as they can go, so as to provide empty beds. Each patient has all that is possible done for him before being discharged, even though the treatment runs into a matter of twelve months or more, as is often the case with nerve injuries.

In order to give a concrete idea of the work done at this institution, it will be best to refer to the various activities under their several heads, and to give a brief outline of the special points noted in connexion with each of them:—

1. The wards.
2. The massage department.
3. The electro-therapeutic department.
4. The plaster room.
5. The X-ray department.
6. The operating theatres.
7. The artist's and photographer's department.
8. The workshops.

1. *The Wards.*

The variety of cases treated is enormous, and includes all sorts of deformities and disabilities, the result of injury, frost-bite, trench foot and gun-shot wounds of muscle, bone or nerves occurring in men who are serving in the Army or who have served and are now pensioners, but for whom something can still be done to better their condition.

As regards splints, the usual types of wooden padded splints have never been used in this hospital, their place being taken by the well-known Jones's iron splints, Thomas's splints and Jones's various modifications of the Thomas's splints for application to the upper extremity. After a fair experience in the use of these splints, the only conclusion one can come to is that they are the only splints for treatment of compound fractures of the upper limb. They are easy to apply and very comfortable for the patient. They allow of easy access to the wound for any treatment necessary, and the results obtained are excellent.

Colonel Sir Robert Jones published a series of articles in the *British Medical Journal* in 1916, of which No. 7, on December 16, deals with the various splints he favours and their uses, so that further detail is unnecessary here, except to emphasize his teaching that in the splinting of fractures of the forearm, whether it be that one or both bones are broken, "the position of supination should invariably be maintained." In most of these cases the arm usually falls into the pronated position, from which it is very difficult, if not impossible, to regain supination, whilst from full supination the movement of pronation is easily recovered. He also points out that in injuries of the wrist, and often with injuries to the muscles and nerves of the forearm, it is essential for the restoration of good function to hold the wrist in the dorsiflexed position during treatment, with either the short "cock-up" splint or the "long hand" splint, according to the condition being treated.

Colonel Sir Robert Jones considers that the use of the long Liston splint in the treatment of fractures of the femur is productive of the majority of the worst deformities seen after such fractures, and looks upon it as being on the same low level for results as the internal angular splint so often used in treating fractures of the humerus. In place of these splints he uses either a Thomas's splint or an abduction frame, as the case demands, for a fractured femur,

and one or other of the modified wire arm splints (already referred to) for a fractured humerus.

In discussing his operation for and the results of removal of the internal semilunar cartilage, he says the incision he now makes use of commences 1.25 cm. internal to the lower edge of the patella, and extends just 5 cm. obliquely downwards and inwards over the cartilage, to stop short over the head of the tibia, in front of the internal lateral ligament. The division of any fibres of this ligament is to be carefully guarded against. He always operates with the leg bent over the end of the table, and removes the whole of the cartilage.

The average period of convalescence is about five weeks, when the man is fit for return to ordinary duty.

We were fortunate one morning in seeing Colonel Sir Robert Jones prepare splints, etc., and reduce a recent Colles's fracture, the whole procedure taking only about five minutes. He did it to demonstate his well-known method and to show us that an assistant was unnecessary; but, as one onlooker remarked, "it is mighty easy when he does it, but a different proposition when you try it yourself."

There were several most interesting cases of bone-grafting, done according to the Albee technique, in the wards of Captains Dunn and Bristow and Mr. Aitken. Use is made of this procedure in cases of ununited fracture, as well as in cases in which there is a portion of the bone missing. The greatest care must be exercised to maintain asepsis, and it is seldom advisable to try to restore a piece of missing bone after a gun-shot wound until the wound has been healed for six to nine months. In one case where a piece of ulna was gone, the wound had been healed for about six months, having taken some two or three months to close over. At the operation, while the bed was being cut from the graft, a small abscess was found in the upper end of the ulna. However, after this was dealt with, the operation was continued, and fortunately proved successful.

Another case may be quoted to illustrate the necessity for being sure before correcting a mal-united fracture that the joints above and below the lesion have their full range of movement. A man was admitted with a good deal of shortening and deformity of the right lower limb, the result of a fracture of the lower end of the femur, with marked backward displacement of the lower fragment. His knee joint was apparently normal, but at the operation, when the fragments were separated and an attempt was made to align them, it was found the knee joint could not be fully extended by some 15°, which made the operation a difficult one, and necessitated the use of a plate to retain the fragments in line. It should have been noticed before operation that if the knee joint had been normal, the man should have had an apparent *genu recurvatum* instead of the leg being in a straight line, and measures should have been taken to regain the normal range of movement.

A simple device seen for aiding a patient with foot drop in walking was the insertion of a leather strap in the edge of the sole of the boot at the toe; the strap comes up over the toe, and, if fitted with eyelets, can be laced up the instep, along with the ordinary boot-lacing, or else may be strapped round the ankle. According to whether there is an associated varus or valgus of the foot, the strap is placed to the inner or outer side of the actual point of the toe of the boot. The device is inconspicuous and effective, but requires adjustment as the leather stretches with use.

A very simple wire "cock-up" splint for wrist-drop was seen, made of a thick gauge piano-wire in one piece. Commencing midway along the radial border of the forearm, the wire comes to the wrist, where a complete loop is made towards the palmar aspect; the wire is then inclined dorsally, and comes along the thumb; when opposite the joint of the first phalanx, a bend is made to hold the thumb, and then the wire is carried across the palm, at the base of the fingers, and turns along the ulnar border of the hand and forearm, with another loop forwards, opposite the wrist. A band of soft leather comes across the front of the forearm, between the free ends of the wire, and another across the dorsum of the wrist, between the two loops, whose other function is to act as a spring in carrying the weight of the hand. The apparatus is very light, simple, efficient and inconspicuous, and needs no bandage.

2. *The Massage Department.*

This is under the care of Dr. Mennell, of St. Thomas's Hospital, who is a great exponent of the teachings and principles of the Lucas Championnière school. He has a staff of some 25 masseuses, who are kept busy most of the day, although he himself only attends for a half a day. He makes it a rule to see each patient and note the progress each week, and, considering the average daily attendance is 300, he has a busy time. The department is very well fitted with all sorts of gymnastic apparatus, the most noticeable and generally useful of which are twelve Sargent combination machines, with adjustable pulleys and rowing attachments; a hydraulic rowing machine, stationary bicycles, wrist rolls, etc., etc. Great use is made of electrically driven vibratory massage machines, and there are several ingenious devices for encouraging and strengthening hand and finger movements. Dr. Mennell points out in connexion with the latter that, as a rule, the surgeon pays too much attention to restoring flexion and extension of the fingers, without realizing that a good deal of the utility of the hand depends upon lateral mobility of all the joints and upon the movements in the metacarpus. He is a very ardent advocate for the proper use of massage in the early treatment of fracture, and, judged by the results seen, he has good reason for his belief.

3. *The Electro-Therapeutic Department.*

This is under the very able direction of Captain Bristow, of St. Thomas's Hospital, who combines this work with his other duties as a member of the surgical staff. Dr. Grainger Stewart, Consulting Neurologist, being interested in the results of treatment in this department, is often to be seen there, for the majority of the patients attending had sustained nerve lesions. There is staff of some 15 female assistants (masseuses), each of whom, before being allowed to undertake treatments alone, was put through a three weeks' course of training in Captain Bristow's methods and ideas.

The constant current from the main is sent through a transformer and reduced before being used through a sliding rheostat with a lamp and milliampère meter in circuit. For treatment after nerve suture, a metronome interrupter is introduced into the circuit, and all muscle points below the level of the nerve injury are stimulated daily by this regularly broken current. Every few weeks the faradic current is tried, and as soon as the faintest response to it is obtained, it is used in conjunction with the constant current. When the response to faradism becomes strong, the constant current is no longer used. The type of faradic coil in use is rather unusual, and the effect it produces arouses the admiration of the onlooker who sees it for the first time. This coil is one introduced by Dr. Morton Smart and Captain Bristow. Its main feature is a coarse winding of the secondary coil, which does away with painful cutaneous stimulation, so that a very powerful muscular contraction can be obtained by a strong current, without the pain that is usual when the ordinary coil is used. In the Bristow coil there is also a condenser in the circuit to the interrupter, which does away with any sparking, and renders the breaks of the current very even in length. The coil is worked from two dry cells or a four volt accumulator, and a switch regulates the voltage allowed through the coil. Another switch regulates the amount of induced current taken from the secondary coil, according to whether one-third, two-thirds or the whole thickness of the coil is used. As well as this, there is a moveable iron wire core for the primary coil, so that there are three controls for the strength of current. Having arranged a current sufficient to produce a weak muscular contraction with the core out, the amount of contracture of the muscle is controlled by the pushing in and out of the core, the degree of contraction being gauged by the fingers and thumb of the hand holding the electrode in position over the muscle being stimulated. In carrying on this faradic treatment, the strongest current that the patient can take is used, as against the weakest current that will produce a response when the constant current is employed.

With the Bristow coil, individual muscles can be exercised and trained in a manner difficult to understand or believe, unless one actually sees the coil at work. It should be mentioned that, in treating the muscles this way, they must always be placed in the position of greatest relaxation to start with, and worked from this position. Captain Bristow is very emphatic about the necessity for treating the muscles controlling any joint, if that joint has had any injury, *e.g.*, in the knee joint after excision of the internal semilunar cartilage, the quadriceps muscle is treated with faradism, commencing about the fifth day. On the first day the treatment lasts ten minutes, fifteen minutes on the second day and twenty minutes on succeeding days, care being taken not to produce fatigue, for some three or four weeks, when the joint is in perfect order and the man returns to duty. Special attention is always paid to the *vastus internus*, as this muscle is most liable to atrophy.

The same treatment is most successfully used in case of synovitis, either acute or chronic. No bandages are allowed, nor are splints, and the patient is encouraged in the use of the limb, the explanation of the success of the treatment being that, by keeping the quadriceps in good tone and preventing any muscular atrophy, the tonus of the joint capsule and ligaments is maintained or increased, and with exercise restoration of a normally functionating joint ensues.

4. *The Plaster Room.*

This is made good use of, for plaster is extensively used by all the surgeons, both for fixed and removable splints. The bandages are made from a special book muslin (No. 14 Manchester) by the nurse in charge of the department, and are usually 15 cm. in width. If a whole limb is being encased, rolls of 6 mm. "piano felt" are used for covering the skin, and is a most excellent material for the purpose, but difficult to procure, even with the necessary ticket issued by the Ministry of Munitions. Casts are taken in any special case, both before and after operation, and these form now an interesting and valuable collection. Casts of limbs are also taken for use in the workshops, as models for the fitting of any special appliance.

5. *The X-Ray Department.*

A Snook apparatus has been provided, with which very satisfactory work is done. The X-ray plates are sent to the wards and kept by the sister in charge. At No. 3 Australian General Hospital, Major Argyle used to index and store the plates, and sent a bromide print and written report to the ward, which were kept with the patient's case sheet, to complete the records of the case, and this system was found to work very well. If a surgeon desired to see the actual plate, or if a stereoscopic picture was taken, he viewed them at the X-ray department.

6. *The Operating Theatres.*

There are two theatres, a main one, built on most up-to-date lines and very fully equipped, and a smaller one for minor cases.

7. *The Artist's Department.*

For the purpose of recording progress of cases, Mr. Bird, R.A., who gives his services voluntarily, makes paintings in oil or water colours, and also takes photographs of cases referred to him by the surgeons. The material so obtained will be of great value in the future for teaching purposes, as a short account of the case is attached to each painting or photograph. These records, taken before and at varying stages of the treatment, and then the final result (especially if plaster casts of the limbs are also taken), constitute a source of knowledge for all who care to study them.

8. *The Manual Curative Workshops.*

As regards the function of these workshops, we could not do better than quote from a memorandum entitled "A Scheme to Expedite the Cure of Maimed Soldiers by Manual Corrective Training," which also contains in detail the equipment required for fitting each of the shops mentioned below.

"Wounded soldiers in hospital find the ordinary treatment so monotonous and the time hangs so heavily on their hands that, in some cases, they give up hope of ultimate recovery. Many of these men are skilled workers in various trades, and might be employed at their trade with benefit to themselves and

fellow-patients, and it would also accelerate their recovery.

"For this purpose, various rooms could be fitted, *e.g.*:—

"1. For carpenters, joiners and fret-saw workers.
"2. A sitting-room for actual workers other than blacksmiths.
"3. A smithy for blacksmiths.
"4. A room for leather workers.
"5. A room for tailors.

"Selected men from these trades could be used in the making of special orthopædic appliances, surgical boots, etc.

"6. A small printing press.
"7. A painters' shop.

"Cutting a hedge with shears will work the muscles of the hand better than the monotony of squeezing a ball. The use of a plane and saw exercises the shoulder and arm better than the usual physical and massage exercises, which, half the time, are not properly carried out. Fret-saw work on a treadle machine is better and more natural than pedalling a dummy bicycle on a fixed base against a brake and with no objective. The same applies with regard to sewing machines, both for tailors and leather workers.

"Gardeners could be employed in the upkeep of the grounds; clerks to assist in various departments. Unskilled men could be taught by the skilled. In this way we could safely count on men making a more rapid recovery and their discharge from hospital accordingly expedited."

A great thing about this plan is that men who have been rendered unfit to follow their pre-war occupations, could learn a new trade to some extent while they are still under treatment, and would accordingly be worth more to the State than if they had been discharged from the Army quite unfitted for any work. There is one fact of importance from an administrative point of view that, since the shops have been open and the men have had something to do, the percentage of "crime" has dropped to practically nil. Having watched the development of these workshops from shortly after their establishment about September, 1916, one is able to appreciate the work that has been done and the keen way in which the men have seized on the opportunities offered. Attendance at and work in the shops is purely voluntary, and, by way of encouragement, it has been decided that regular workers may be given permission to wear their khaki instead of the blue hospital uniform, and be granted special evening leave to make up for the time they put in at work in the afternoon. Of course, the men can only attend after they have received their daily treatment, and the routine of the hospital is not allowed to be interfered with.

The workshops in full swing at present are: (1) tailors', (2) bootmakers', (3) carpenters', (4) painters', (5) blacksmiths', (6) engineers' and metal workers', (7) orthopædic and splint making, (8) cigarette makers', (9) draughtsmen's and clerks', and (10) leather workers'.

The machinery, tools and raw material to start these shops were supplied by the British Red Cross Society, but the actual establishment, planning out and fitting of the shops has all been done by the patients themselves, under the direction of Mr. Herbert Poate, in accordance with designs submitted by him. There are only two salaried workers, who are civilians, and expert in the making of orthopædic appliances, and they act as instructors.

The volume of work turned out is now enormous, and all requirements of the hospital are met. The quality of the work is first class, especially in surgical boots and orthopædic appliances of all sorts. An exhibition of the work done by the patients was held recently, and attracted widespread attention.

The main trouble experienced is that the workers are constantly being changed, as patients are discharged from the hospital, but it is hoped that permission may be obtained to retain some of the expert "*Ciii*" men as instructors.

The material is now being supplied by the War Office, as these shops have received official approval, and in the near future further developments of this scheme are expected at various centres.

The authorities in France have undertaken the training or re-education of the disabled soldier on a very extensive and scientific scale, having realized long ago the incalculable gain to the State that such training means. The French offer every inducement to the men to enter the schools, which are under State control. Their success seems largely due to the fact that it is made plain to the men from the outset that, although they will be eventually able to augment their wage-earning capacity greatly, no alteration will be made to their pension on that account.

It might well be worth while for the Commonwealth to establish similar training schools in each State in the very near future, if something in that way has not already been done, as the eventual economic gain to the State would amply justify the initial outlay. The schools could later on be handed over for the instruction of civilians, but, while being used for the training of men disabled as a result of military service, it is essential for both schools and men to be under military control and subject to military discipline.

GUN SHOT WOUNDS OF THE KNEE JOINT.

By **F. L. Gill, M.B., Melb.,**
Captain, Royal Army Medical Corps.

At the General Hospital in France, where the work dealt with in this article was carried out, an attempt was made at the beginning of July, 1916, the time of the commencement of the battle of the Somme, to group together in special wards the more important classes of cases. One ward was set aside for head wounds, another for wounds of the chest, another for injured femora, and another for knee joint injuries, each of these special wards being under the charge of a separate medical officer.

It is, therefore, possible to give the methods of treatment and the results of such methods in practically every case of gun shot wound of the knee joint which has been admitted to this hospital during the past eight months.

In compiling this series of cases, care has been taken to include only those where no doubt existed as to actual penetrations of the joint.

Seventy cases have been treated. In four of these amputation was performed. One patient died three weeks later from meningitis, following on a compound fracture of the skull.

In dealing with cases of gun shot wounds of the knee, the difference in the degree of infection between bullet wounds and shell wounds, always noticeable in other regions of the body, was so outstanding as to lead to the adoption of a classification according to the nature of the missile, so far as this could be ascertained. The influence on prognosis and treatment of such information is so important that no effort should be spared to determine the causal agent, both from the patient's statement and the character of the wound.

I. Machine Gun and Rifle Bullet Wounds.

Of the 70 cases referred to 31 were cases of rifle or machine gun bullet wounds. In no case did a septic arthritis supervene, an uninterrupted recovery following in every case.

In no case was the bullet retained.

Owing to pressure of work, routine X-ray examination was not made in cases in which there was no question as to the wound being caused by a rifle bullet. Of the cases in which radiographs were taken, eight showed fractures, four of the head of the tibia, three of the condyles of the femur, and one of the patella. From the position of the wounds it is probable that many of the other cases had slight fractures.

Treatment.

Splints.—Immediately on admission the limb is immobilized and the joint firmly bandaged, back splints with foot pieces and side Cline's being used, except in cases with wounds on the posterior surface of the limb, where a Thomas's knee splint without extension is employed.

Once applied the splint is not removed, the wounds being dressed every 24 hours with eusol dressings.

Excision of wounds is not practised. A few cases were admitted where wounds had previously been excised. In two of these, the joint cavity was accidentally exposed at the operation, fortunately without serious results. The only result of excision that has been observed is delay in healing, while no ill-effects have occurred when bullet wounds were not excised.

Aspiration was not employed in any of these cases. It is the practice of some surgeons to aspirate practically all cases of wound of the knee joint, this being frequently followed by the injection of an antiseptic, such as ether or 2% formalin in glycerine. The object of aspiration is twofold: (1) Relief of distension of the capsule and (2) the obtaining of a specimen for bacteriological examination.

Aspiration for relief of distension is only necessary where the degree of distension is so great as to endanger the capsule. In this series the degree of distension was never excessive, therefore aspiration for mechanical reasons was unnecessary. For diagnostic purposes it appears to be equally unnecessary, for the majority of bullet wounds of the knee recover uneventfully. Should recovery be delayed, aspiration may prove of the greatest value.

The question of injection of an antiseptic will be dealt with under the heading of "shell wounds." It may be pointed out here that the inclusion of cases of bullet wounds, or of cases in which moderately small shell fragments are removed at an early date, two classes which we find to give extremely satisfactory results without injection in statistical records, tend to give a false impression of the value of such treatment.

Course.

With few exceptions recovery was rapid. The majority were admitted about 36 hours after being wounded.

The temperature, which as a rule was between 37.8° and 38.3° C. on admission, fell steadily, reaching normal on about the fifth day after the injury. In many cases the temperature did not rise above 37.2° C.. In two cases it reached 38.9° C. on the day of admission. One patient had a constant temperature of 39.4° C. until the sixth day. The wounds had been excised at a casualty clearing station, and the joint, which was accidentally opened, was washed out with eusol.

Absorption of the effusion takes place rapidly and, as a rule, is complete in about seven days, being greatly hastened by firm bandaging.

Fracture.

The influence of fracture on the course of the case was found to be surprisingly slight in the majority of instances.

With the exception of two cases to be described later (Cases 1 and 2), the temperature reached normal between the tenth and fourteenth day, the period of pyrexia being thus about a week longer than in the average case without fracture.

The degree of pyrexia was the same, *viz.*, between 37.8° and 38.3° C..

The following cases which did not run the normal course may be described.

(1) Sergeant J. was admitted 36 hours after injury. A rifle bullet passed through right limb, completely dividing popliteal artery without opening the joint; it then struck the lower end of the left femur five centimetres above the joint. The right popliteal vessels were ligatured. A slow gangrene of foot supervened. Amputation below the knee was performed on the fourteenth day after admission.

A supra-condylar fracture of the left femur, with much comminution of both condyles, running into the joint, had taken place. There was 7½ cm. of shortening. The lower end of the upper fragment was lying just below the skin on the outer side at the level of the joint. There were small wounds of entrance and exit. The joint was firmly splinted and no attempt at reductions of the deformity was made, on account of the risk of lighting up an infection in the joint, which was considerably distended.

On the twenty-fifth day the limb was put up on a Thomas's splint and a screw extension applied. The shortening was reduced to 0.5 cm. The knee was then semi-flexed; the position as seen in the skiagram was very good. The temperature remained normal from the twenty-seventh day. Recent notes indicate that he was walking on crutches three months after date of injury with flexion to 45° in the left limb. There was full movement of the right knee. He now has full movement of both joints with no pain or swelling.

(2) Corporal A. The bullet first hit his left leg, causing a comminuted fracture of the tibia, which became extremely septic, then it struck the right patella, which was shattered into small fragments. There was a large, stinking wound

over the patella, 7.5 cm. in diameter, from which streptococci, staphlococci and numerous *Bacilli tetani* were isolated. The limb was firmly splinted. The wound was treated with Carrel's tubes and eusol. It cleaned up rapidly, numerous bone frgaments sloughed, including several with articular cartilage attached, showing that the supra-patellar pouch was opened. The swelling of the joint rapidly subsided. The temperature reached normal in four weeks and was normal for nine days. The patient was evacuated to England.

There was no evidence of general arthritis.

This case illustrates very well the infinite capacity of the knee joint for shutting off infection.

So great is the probability that bullet wounds of the knee joint will heal naturally that some intercurrent condition should always be excluded in cases in which the temperature rises. This is well illustrated by cases 3 and 4.

Case 3.—Private B. The wound in the knee ran a perfectly normal course. On the seventh day the temperature rose to 39.8° C.. A diagnosis of trench fever was confirmed by two typical relapses.

Case 4.—A bullet passed from front to back through the intra-condylar notch. The joint wound ran a normal course, but on the fifth day the patient commenced a sharp attack of influenza with temperature to 38.9° C., falling to normal in five days. There was a ward epidemic at this time, the patients on either side of this man were also infected.

Case 5.—There was an antero-posterior wound with fracture of head of tibia. The temperature fell steadily till sixth day. On the seventh day the temperature rose to 38.8° C., accompanied by increase of pain in the knee joint. On the eighth day the temperature fell to 36.8° C. and remained normal.

Case 6.—Private L. had an antero-posterior wound through the centre of the knee joint. The wound healed without trouble. There was also a penetrating bullet wound in the forearm, without fracture, which became septic and required drainage.

Case 7.—Sergeant C. had his wounds excises at a casualty clearing station, and sutured 24 hours before admission to our hospital. On admission the thigh and leg were enormously swollen, being nearly twice the diameter of the other limb. Next day the sutures were removed and subcutaneous pus evacuated. The swelling subsided rapidly and the temperature reached normal on the ninth day. Five weeks later there was free movement of the joint.

End results. All cases were kept till the joint was normal in appearance and the temperature normal for several days.

It is of course difficult to keep in touch with cases after evacuation to England. The Committee for the Medical History of the War have returned final reports on seventeen of these men. Eight have been marked "fit for active service." Five were in convalescent camp and expected to be marked "fit for active service." Three were walking in hospital and one at least will probably be fit for active service. One has been marked "fit for home service only." This man was shot through the same knee by a rifle bullet during the South African war.

II. Shell Wounds—39 Cases.

Into this class fall all the cases which have presented real difficulties in the course of treatment.

It comprises:—

(1) Cases of retained foreign bodies.
(2) The majority of cases with severe fractures.
(3) All the cases in which a septic arthritis supervened.
(4) All cases ending in amputation.

The only case in the series where the termination was fatal belonged to sub-group 4.

Routine.

As already stated, all cases are seen on admission and the nature of the missile determined, if possible. When a shell wound is diagnosed, the patient is, at the earliest possible moment, removed to the X-ray room; antero-posterior and lateral plates are taken, while foreign bodies, if present, are localized.

The limb is then immobilized, except in cases in which immediate operation is decided upon.

The cases fall into two groups:—

(*i.*) Cases in which foreign bodies are not retained.
(*ii.*) Cases with retained foreign bodies.

(*i.*) *Cases in which foreign bodies are not retained.* This class includes through-and-through wounds and lacerated wounds extending into the joint, and may be sub-divided as under:—

(*a*) Clean wounds without signs of a septic arthritis. These are rare in the case of shell wounds. Only four such cases were met with. Three of the patients recovered without operative interference. In one there was a fracture of the external condyle of the femur, and in another a fracture of the patella. In the third a simple penetrating wound of the supra-patellar pouch; and in the fourth, a lacerated wound on the outer side of the knee, became septic three days after admission.

Treatment.

Eusol dressings are applied and expectant treatment employed as in bullet wounds.

(*b*) Lacerated wounds which can be seen to open into the joint. There were two such cases. In one the wound, which was clean, was excised, the joint washed out with hot saline solution, ether was injected and the synovial membrane, capsule and skin were sutured. The patient made a good recovery. In the second case the wound, which was foul, was excised, the joint washed out and 2% formalin in glycerine injected. The synovial membrane and capsule were sutured, but not the skin. The joint, as was expected, became septic and required a radical operation.

(*c*) Grossly infected wounds without signs of septic arthritis.

Treatment.

Wounds are excised and treated by the Carrel-Dakin method. Four cases were treated in this way. In two there were fractures of the external condyle of the femur, and in another a fracture of the head of the tibia. All three required operation for septic arthritis.

The fourth case was a lateral wound through the patella. A fracture into the joint was detected on the skiagram. A Carrel's tube was passed through the hole in the patella and the patient made a rapid recovery.

(*d*) Cases with signs of a septic arthritis on admission. The diagnosis is confirmed by examination of a specimen of the joint contents obtained by aspiration, and radical operation

proceeded with at once. Four such cases were met with; the treatment of cases of septic arthritis is described below.

(*ii.*) *Cases in which foreign bodies are retained.* With the reservations mentioned below, in our opinion, foreign bodies retained in the knee joint should be removed at the earliest possible moment. We are convinced that if all shell fragments in the knee joint could be removed at the casualty clearing stations within the first 24 hours, the number of cases of septic arthritis met with at the base would be reduced by about 50%.

Of about 20 cases admitted during the last eight months, in which the missile had been extracted at a casualty clearing station, only two became septic. The remainder of the patients owed their recovery to the efficient measures taken before admission here and have, therefore, not been included in this series.

In a few cases, however, a "wait and see" policy should undoubtedly be adopted.

Foreign bodies, smaller than a split pea, and foreign bodies which have passed through the suprapatellar pouch and lodged in the femur, rarely give rise to sepsis, and should be left alone. Of this class three cases were met with. Two of these, were operated on with success at a later date in Engalnd. The third patient has not been heard of, but left France with a normal temperature.

As a rule cases, in which shell fragments were removed at this hospital, were operated on within 48 hours of the time of injury. One of the cases was operated on after five days with success. In another a shell fragment wrapped in clothing was removed from the joint after four and a half days with success.

Foreign bodies were removed in 16 cases. In 11 complete recovery followed. In five the joint became septic.

Operation to Remove Foreign Bodies.

When possible the wound is shut off from the area of operation, and the joint opened by a fresh incision. When the foreign body lies under the wound, the latter is excised down to the capsule; then, fresh instruments being used, the wound in the capsule and synovial membrane are excised.

After the removal of the shell fragment, a careful search is made for scraps of clothing. The joint is then washed out with about two litres of normal saline solution under low pressure; the synovial membrane and capsule are sutured with catgut.

The skin is never sutured, as it was found that in many of the cases operated on at casualty clearing stations subcutaneous packets of pus formed when skin sutures were employed.

Antiseptic Injections.

As has already been stated, this method was not used in any of the cases of bullet wounds, all of which did well.

In cases of shell wounds it has not been extensively employed, and has practically been abandoned.

Excluding four cases in which a septic arthritis was present on admission, there were 34 cases of shell wounds.

Of these, nine were injected, five healed well and four become septic; 25 were not injected, 16 healed well and nine became septic.

(*To be Continued.*)

Reviews.

TROPICAL DISEASES.

The appearance of a second and enlarged edition of Stitt's "Diagnostics and Treatment of Tropical Diseases"[1] will be welcomed by students of tropical medicine. In form and matter alike the book is particularly well designed to supply the working needs of the tropical practitioner, and it also provides perhaps the most comprehensive work of ready reference at present available for those whose interest in tropical diseases is confined to an occasional puzzling case. Such cases, with a tropical basis, are more commonly encountered in temperate climates than is generally believed. Guinea-worm, bacillary and amœbic dysentery, sprue, liver abscess, filariasis, beri-beri, ankylostomiasis, leprosy, and a considerable assortment of malarial cases have all come within the reviewer's purview in the coolest of the Australian States. All were, of course, imported, but the migratory tendencies of the Australian, the unprecedented conditions created by a world-wide war, and the vast geographical and climatic range of Australian territory render it more than ever necessary that the practitioner in any part of our far-flung country should have available some handy work of reference to the great group of diseases which occur with particular frequency in warm climates. As Dr. Stitt points out: "In temperate climates we always keep in mind syphilis, tuberculosis, and the pyogenic infections when a diagnosis is in question. In the tropics these conditions are just as common, if not more so, and, added to them we have many other diseases with protean manifestations, such as malaria, beri-beri, leprosy, ankylostomiasis and other helminthic infections, pellagra, and amœbiasis."

The author traverses, rather ruthlessly, many of the popular views regarding diseases in warm latitudes, and emphasizes the futility of expecting to encounter only the so-called tropical diseases in a tropical country. Typhoid fever, for example, was held up to quite recently, even by many whose work lay in warm climates, to be rare or even unknown in the tropics. Precise laboratory diagnosis, and wider observation have proved that it and paratyphoid are quite common, although their course is often atypical. Mumps, diphtheria, pneumonia, influenza, tuberculosis, whooping cough, and chicken pox all occur with fair frequency. Rheumatic fever and scarlet fever are, in fact, the only two diseases of temperate climates which are of extreme rarity in the tropics. Syphilis, when occurring in natives, often displays a striking absence of paretic and tabetic manifestations. Stitt quotes a curious observation by Le Dantec, who notes that he has never observed parasyphilis in any European who has contracted syphilis from a native woman, an observation which, he considers, points to the existence of different strains of syphilis. The old established hypothesis of "tropical anæmia" (which has already been exploded so far as tropical Australia is concerned by the work of Breinl and Priestley on blood specimens from school children born and bred in the Australian tropics) is fully dealt with. The once dreaded actinic rays of the sun, for protection from which there have been devised strange and many coloured garbs, are now known to be of the same intensity in Iceland and in Panama. "Tropical neurasthenia" is mainly a product of malaria, lack of exercise, digestive disturbances, or alcohol, in various combinations and permutations.

The remarkable results obtained by Rogers in Calcutta from intravenous perfusion of hypertonic saline solution in cholera might well have received fuller consideration, although the author states (p. 188) that in the Philippines

[1] The Diagnostics and Treatment of Tropical Diseases, by E. R. Stitt, A.B., Ph.G., M.D. Second edition, revised and enlarged, with 117 illustrations; 1917. Philadelphia: P. Blakiston's, Son & Co. Demy 8vo., pp. 884. Price, $2 net.

normal saline solution seemed to answer as well as the hypertonic solution. Rogers reduced his mortality from 59% of all cases, admitted at any stage, to 25% on a series of 1,003 cases during six years. Further emphasis is also indicated with reference to the necessity for efficient masks and respirators when pneumonic plague is to be dealt with. The observations of Teague and Strong in Manila on this subject showed that the ordinary improvised combination of wool and gauze is quite unreliable as a protection from drop-infection. The preference which the *Stegomyia fasciata* mosquito, carrier of yellow fever, is stated (p. 226) to display for selecting sewage-tainted water is not borne out by Queensland observation. The Australian representatives of this dangerous species—and they constitute perhaps the commonest of the domestic mosquitoes in coastal towns from Brisbane to Darwin—select clean water whereever possible, for egg depositing purposes, leaving less clean waters to their filaria-conveying colleague, *Culex fatigans*. The author, too, credits *Stegomyia fasciata* with a complete absence of the warning sound characteristic of most mosquitoes. It may be that migration to a free and democratic country has improved the creature's powers of creating noise—a similar phenomenon is frequently noticed amongst imported specimens of the genus *Homo sapiens*—but *Stegomyia fasciata* in this country emits a thin and faint but definite warning sound.

These details, however, do not detract from the general value of the book. It may be summed up as a very successful attempt to provide a volume which, while it can be readily slipped into a jacket pocket, contains in readily accessible form, a complete description of the diseases of warm climates, from the standpoint of the practical clinician.

Naval and Military.

HONOURS.

In the *Commonwealth of Australia Gazette*, No. 9, of January 24, 1918, the following extracts from the *London Gazette* of July 27, 1917, and September 25, 1917, are published:—

War Office,
27th July, 1917.

The names of the undermentioned have been brought to the notice of the Secretary of State for War for distinguished services rendered in connexion with the war:

. . . . . .

Hayward, Lieutenant-Colonel W. T., C.M.G., A.M.C.
Hurley, Lieutenant-Colonel T. E. V., C.M.G., A.M.C.
Millard, Colonel R. J., C.M.G., A.M.C.

* * *

War Office,
26th September, 1917.

His Majesty the King has been pleased to confer the undermentioned rewards for gallantry and distinguished service in the Field.

The acts of gallantry for which the decorations have been awarded will be announced in the *London Gazette* as early as practicable.

. . . . . .

Awarded the Military Cross.

Captain John Canute Gordon Glassford, A.M.C.

APPOINTMENTS.

The following appointments, promotions, etc., are announced in the *Commonwealth of Australia Gazette*, No. 9, of January 24, 1918:—

Army Medical Corps.

To be Majors—

Captains R. W. Hornabrook, H. S. McLelland, E. A. Brummitt, H. R. Catford, A. C. Fraser, H. Pern, J. B. Lewis, R. J. Taylor, G. S. Robinson, M.C., Captain (temporary Major) A. E. Colvin, M.C., Captains W. H. Rennick, W. W. S. Johnston, M.C., A. S. Curtin, J. J. Power, E. H. Rutledge, D. D. Jamieson, M.C., J. B. Bell, A. H. Powell, D.S.O., S. C. Fitzpatrick, M.C., I. Blaubaum, J. H. Downing, J. R. S. G. Beard, M.C., C. T. Turner, M.C., K. H. Grieve, M.C., H. H. Willis, Captain (temporary Major) C. S. Browne, Captains R. C. Winn, M.C., H. R. J. Harris, G. C. Willcocks, M.C., J. V. Griffith, H. W. F. Mitchell, M.C., Captain (temporary Major) K. S. Cross, K. R. de V. Shaw, R. M. McMaster, 24th August, 1917.

Captain J. Aiken, Australian Army Medical Corps, has been discharged from the Australian Imperial Force, having been found to be permanently unfit for War Service at home or abroad, 23rd August, 1917.

Major W. Vickers, from No. 9 Field Ambulance, to be Deputy Assistant Director Medical Services, 3rd Australian Division, 22nd August, 1917.

To be Lieutenant-Colonel—

Captain A. M. McIntosh, Australian Army Medical Corps. Dated 16th January, 1918.

To be Major (temporarily)—

Honorary Captain G. G. Nicholls, Australian Army Medical Corps Reserve. Dated 19th January, 1918.

1st Military District.

Australian Army Medical Corps—

Captain (Honorary Lieutenant-Colonel) J. E. Dods, D.S.O., M.C., from the Unattached List, to be Principal Medical Officer (temporarily), with temporary rank of Lieutenant-Colonel and pay at rate of £685 per annum whilst holding this position. Dated 16th January, 1918.

The appointment of Captain (temporary Lieutenant-Colonel) A. M. McIntosh, as Principal Medical Officer (temporarily), to be terminated. Dated 15th January, 1918.

The appointment of Captain (temporary Lieutenant-Colonel) J. E. Dods, D.S.O., as President of Permanent Medical Referee Board, is terminated. Dated 15th January, 1918.

2nd Military District.

Australian Army Medical Corps—

Honorary Captain E. M. Humphrey to be transferred from Australian Army Medical Corps Reserve, and to be Principal Medical Officer (temporarily), with temporary rank of Lieutenant-Colonel and pay at rate of £800 per annum, inclusive of all allowances except travelling. Dated 11th January, 1918.

Captain (temporary Major) A. J. Mackenzie to be Officer Commanding No. 4 Australian General Hospital (temporarily), with temporary rank of Lieutenant-Colonel and pay at rate prescribed by Financial and Allowance Regulation 340. Dated 16th January, 1918.

The appointment of Honorary Captain E. M. Humphrey as Adjutant (temporarily), with temporary rank and pay of Major, is terminated. Dated 10th January, 1918.

3rd Military District.

Australian Army Medical Corps—

Lieutenant-Colonel H. A. Embling, V.D., from the Unattached List, to be Officer Commanding No. 5 Australian General Hospital (temporarily), with pay of rank at rate prescribed by Financial and Allowance Regulation 340. Dated 11th January, 1918.

Major C. A. Courtney to be member of Permanent Medical Referee Board, with pay consolidated at rate of £550 per annum. Dated 19th January, 1918.

The appointment of Honorary Captain (temporary Major) G. G. Nicholls as member of Permanent Medical Referee Board, is terminated. Dated 18th January, 1918.

Termination of Appointment.

The appointments of the undermentioned officers to be terminated from dates stated opposite names:—

Lieutnenant-Colonel H. A. Embling, V.D. Dated 10th January, 1918.

Major L. S. Latham. Dated 11th January, 1918.

Major J. V. Griffith. Dated 16th January, 1918.

The Medical Journal of Australia.

SATURDAY, FEBRUARY 2, 1918.

The Detection of Feeble-mindedness.

In the Sydney *Sun* of January 23, 1918, there is an account of the discovery of four sleepers having been placed on the Armadale railway line in Western Australia. It is stated that a boy, aged 15, was arrested and admitted that he had placed the sleepers on the line. "He is dull-witted, but has not hitherto been suspected of mental denrangement." In September, 1917, a girl, aged 16 years, living at Preston, in North Queensland, murdered her father, because he had been unkind to her and had called her hard names. After the murder, she covered the body with cane trash and then went to a dance. A medical practitioner gave evidence at the trial to the effect that he regarded the girl as "quite sane." Many other cases of this character could be quoted to demonstrate that neither the public, nor the average lawyer or medical practitioner has a proper grasp of the psychology of the imbecile. A boy is recognized as being dull-witted, but the public has no suspicion that his mind might become deranged. Assuming that the boy is a low-grade imbecile, his act in placing sleepers across a railway line is not a sign of mental derangement. It is merely one of those acts which high or low grade imbeciles perform frequently. The girl who murdered her father in cold blood without any reasoned motive, was not insane in the ordinary meaning of the term. She was a high grade imbecile and a danger to the community and to herself. When the Queensland Executive Council commuted the sentence of death to two years of hard labour, and immediately released the girl on her entering into recognizances of £100 to be of good behaviour for two years, they revealed an utter ignorance of the nature of her mental state. The insane person may recover and be able to live a useful life as a free citizen, without risk to himself or his neighbours. With the feeble-minded the case is different. Recovery is impossible, because the defect is an arrest of development. The mental power of the individual remains that of an undeveloped child for the whole course of his existence, and as the body developes and the animal qualities and capabilities of the individual strengthen, the possibility of a violent act resulting from impulse, persists and does not diminish until senile changes lead to diminished sexual and other passions and a weakening of muscular strength. The maniac is less dangerous to the community, because the whole world recognizes that he is insane and demands his control. The imbecile is regarded as stupid, dull, weak and harmless. The usual conception of a feeble-minded child is limited to the clinical picture of the lowest grade, with open mouth, vacant stare, marked stigmata and slouching walk. The public and even the majority of medical practitioners do not realize that the most dangerous imbecile is the individual with good memory, excessive vanity and practically normal appearance, whose intelligence is that of a child of ten years. A normal person viciously disposed may commit a crime, but will not do so without a strong motive and without full consciousness of the effect of the crime on himself and others. The crime may be committed in a passionate outburst, which is indistinguishable from momentary insanity. But even when passion removes the normal control over a man's acts, there is always a strong motive producing the loss of control, and the subsequent behaviour of the criminal is dictated by reason. The imbecile, even the high grade moron, acts without the realization of the results of his deeds, and behaves in precisely the same manner as a child of tender years would behave, if unchecked by a mother's caring hand. There is, however, one essential difference between the feeble-minded adult and the normal child. In the normal child the sexual functions and the power of initiative are awakened gradually as its higher mental faculties develope and as competition forces it to be self-reliant. The sexual appetite and the desire to possess worldly goods are present in the imbecile, but not so the intellectual faculties. The Royal College of Physicians of England defined the feeble-minded individual as a person "capable of earning a living under favourable circumstances, but incapable from

mental defect, existing from birth or from an early age, of competing on equal terms with his normal fellows or of managing himself or his affairs with ordinary prudence."

In his important and captivating book on the criminal imbecile, Dr. H. H. Goddard records three recent cases which are unique in that for the first time the Binet-Simon tests were admitted in evidence by the courts. In one case the defendant was acquitted on the ground of criminal imbecility. A boy, aged 19 years, with the mind of a child of ten, committed a murder in circumstances which revealed the condition of feeble-mindedness to the expert. He was a high grade imbecile, and while his act was probably impelled by a train of confused thought based on sexual desire, his reasoning was so obviously defective that he had no perception of the immediate and remote consequences of his act. The two other cases serve to demonstrate the state of mind of a feeble-minded boy capable of acting on the suggestion of a vicious person, and of an irresponsible lower grade imbecile, whose tendencies were of a cruelly brutal nature. In the first case the court spared the murderer the electric chair, but insisted wisely on his life-long detention under adequate control.

The safety of the public and consideration for those unfortunate defectives and their relatives demand that every imbecile shall be placed permanently under safe control. The State must realize its responsibility in this matter and must not allow tender-hearted relatives to intervene unless they can guarantee that a continuous watch will be kept over the movements of their unfortunate chargelings. It is not sufficient to provide institutions for feeble-minded children. The more dangerous period of life is when the boys grow up and commit sexual and other assaults on innocent persons, and when the feeble-minded girl is subjected to the influence of the unscrupulous scoundrel, reproduces her deficient mental qualities in her off-spring and thereafter swells the ranks of the prostitute. But before any change can be made, one step is essential. The student and the medical practitioner must be taught by expert psychiatrists to recognize the various grades of imbecility. Our great teaching hospitals should have properly equipped clinics where psychiatry in all its branches is taught by competent persons, and greater facilities should be held out for medical men to become expert. A Chair of Psychiatry, numerous teaching positions and organized research in connexion with psychiatric clinics and hospitals for the insane should be provided for the good of the public and of the profession. Lawyers, judges and eventually the public could thus be educated to recognize something of this immensely important problem.

THE PREVENTION OF DIPHTHERIA.

In the present issue we publish a table setting forth the number of cases of infective disease notified throughout Australia during the third quarter of 1917. The publication of these figures has been delayed until the corrected mortality figures were available. In December last attention was called to the significance of these tables in connexion with the notification of cases of diphtheria. The fact that in the twelve months ending on September 30, 1917, no less than 13,807 cases of diphtheria had been notified to the health authorities in the six States, justifies a return to the subject of the prevention of this common disease. Although the incidence of the disease was less in the third quarter of the year than in the first or second, the mortality was higher. It may be that the proportion of mild cases which had not been notified, was higher during the third quarter, or it may be that the case mortality was actually higher. In either case, it is essential that the knowledge at our disposal should be employed for the purpose of gaining a mastery over the disease. Since diphtheria is a disease which is conveyed by direct contact from person to person, there is less difficulty in combating it than would be the case were the infecting organism conveyed by some vector. When a case of diphtheria occurs it is certain that the infection has been handed on from a person suffering from the disease or from a person harbouring virulent bacilli. The health authority should have little difficulty in discovering whether the disease has been caught from a previous sufferer. Enquiry should be made concerning the persons who

had been in contact with the patient during one week before the illness manifested itself. The bacteriological examination of the mucus from the fauces of these persons will reveal firstly whether the disease may have been conveyed to the patient by one of them, and secondly whether any of them were in a condition to spread the disease further afield. Thus in the search for the source of the infection the health authority gains knowledge which enables them to prevent its spread. Similarly, all persons who were known to have been in contact with the patient during the illness up to the time of the enforcement of isolation and control, should be subjected to a similar examination. It must be borne in mind that if the throats of all persons could be examined by the usual method known as swabbing, and if all persons harbouring bacilli were isolated until the bacilli disappeared, the disease would necessarily die out. It, therefore, becomes a question of expense. In the present circumstances, it would be Utopian to expect the State Governments to sanction the expenditure necessary to control the fauces of the whole community. Much, however, can be accomplished by a methodical search for carriers in the environment of every notified case. Where medical officers in sufficient numbers are not available, well-trained nurses should be employed for the purpose. The cost would be so trifling and the gain so great that no Treasurer, no matter how hard pressed, could object to back the bill.

TO FURTHER RECRUITING.

A correspondent has suggested that medical practitioners might assist indirectly in the endeavour to secure recruits to reinforce our troops abroad by tacitly reminding the public that the Empire is at war. The proposal is that the Minister for Defence should order all persons holding commissions in the Australian Army Medical Corps Reserve to wear a distinctive badge. The suggestion is excellent and has our hearty support. Medical practitioners are in constant touch with the whole community, and notwithstanding the opprobrium cast at the profession by certain friendly society leaders and managers of hospitals, they command the respect of their patients. Few practitioners would care to utilize a visit for the purpose of attempting to convert an anti-conscriptionist into a soldier, but a silent witness, in the shape of an arm-band signifying that the wearer has undertaken to perform military service, might have the effect of impelling a large number of people to consider their duty in the cause of the Empire very seriously. The arm-band could indicate by its colour the rank of the wearer and could be worn with civilian dress. In these days of failing response to the demand for recruits, a proposal of this kind should not be lightly cast aside. We commend it to the Minister for Defence.

TUBERCULAR BACILLÆMIA.

The study of immunology has made it abundantly clear that an invading organism has difficulty in establishing itself in the circulating blood because of the antibacterial power of the serum and also because the conditions favourable to continued growth of bacteria, namely, concentration of the sown bacteria and absence of disturbing movement in the pabulum, are not present. On the other hand it is probable that from a given focus of bacteria in the tissues a few bacteria are washed into the blood stream from time to time. Once the bacteria have gained an entrance, there are two obstacles preventing their multiplication within the blood. The first is extremely rapid in its action. It is the mechanical distribution of the bacteria. Within a very brief period the bacteria which have entered the blood stream in a group, will be carried singly or in twos or threes to the capillaries, and if arrested there, they may be removed from the vessels either within the body of phagocytes or by the direct action of the endothelial cells. The second obstacle is comprised of the bactericidal or other destructive action of the fluid in which these bacteria are bathed. It therefore follows that before a bacillæmia can be established, certain conditions must be fulfilled. The number of bacteria introduced into the blood stream must be relatively large. The antibody action of the serum must be feeble, and the bacteria must be able to find a segment of the vascular system, where the circulation is relatively sluggish. It has been shown that pyrexia results from the dissociated products of bacterial substance. It is therefore probable that the entrance of bacteria into the blood stream under ordinary conditions in the course of an infection is followed by the death of some or all of the bacteria, and by the dissociation of their bodies, with an immediate thermic reaction. If this be true, the temperature chart should form the best guide to the bacteriologist in seeking bacteria in the blood. As the temperature curve is rising the bacteria should be coming under the influence of the antibodies, while when the temperature has reached the highest point of the curve for the day, all the bacteria should be dead or arrested in the capillaries.

There is ample experimental evidence to show that in the majority of pyrexial affections the causal organism can be recovered from the blood at a time when the daily temperature curve is just beginning its ascent. The irregular and often contradictory results registered when attempts have been made to obtain tubercle bacilli from the blood may be due to the fact that the search is usually made at a chance hour of the day. Numerous attempts have been made to establish the fact that tubercle bacilli invade the blood in tuberculosis. Dr. Mildred C. Clough has collected a large number of records, and has found that in 66.6% of cases of miliary tuberculosis guinea-pigs have been successfully inoculated with blood.[1] The percentage of proved infection of guinea-pigs with the blood of persons suffering from other forms of tuberculosis was found to be as low as 6.7. She therefore sought to obtain confirmation of the existence of a bacillæmia in miliary tuberculosis by direct cultivation of the bacilli. Utilizing the following procedure, she obtained typical growths in three successive cases. Blood was added to glycerine broth, and after a short period of incubation, the sediment removed by centrifugalization, was planted on blood agar. In the next place, she endeavoured to shorten the period of time necessary for growth to become visible. The blood was hæmolyzed in distilled water and the sediment planted at once on to blood-agar. Cultures were obtained in 7 days, 13 days and 25 days by this method. The third suggestion has apparently not yet been worked out in practice. It consists in treating the sediment with antiformin to get rid of contaminating bacteria. It is not surprising that cultures were obtained in five experiments out of seven. In miliary tuberculosis the protective mechanism is breaking down and the bacilli would have a good chance of escaping destruction in the blood. In the second place, the sources from which bacilli could be washed into the blood stream are numerous, and there must be many segments of the vascular system, where vessels are more or less cut off from the general circulation. In these areas the bacilli would have more favourable conditions for multiplication than in the moving stream. Whether blood culture can be utilized as a practical diagnostic method remains to be seen. The experiments referred to are certainly suggestive.

RHEUMATIC MYOCARDITIS.

The evidence of a myocardial involvement in acute rheumatism is of recent origin, and the frequency of its occurrence has scarcely been established. Prior to the introduction of the electrocardiogram, it was assumed that the toxin of rheumatism acted upon the cardiac muscle, depressing its irritability and leading to a dilation of the cavities of the heart. The gross anatomical changes seen after death usually consisted in degenerations, either of a fatty or of a fibrous nature. It was taught that these degenerations were secondary to long-standing deformities of the endocardial membrane and to profound pericardial changes. Minute examination of the heart in a first attack of acute rheumatism has revealed that an initial change in the cardiac muscle of a toxic nature is extremely common. The change consists in an inflammatory swelling or œdema. Repeated attacks lead to the development of submiliary nodules, which were first described by Aschoff and Tawara. These nodules are inflammatory and are distributed in an irregular fashion, being found chiefly in the perivascular tissue, and also in the region surrounding the central fibrous body. The interventricular septum and the papillary muscles are rarely involved, and it is doubtful whether the auricular muscle is ever the site of these nodules. From Coombs we have information which suggests that the primary or early involvement of the myocardium indicates the sites of special vulnerability to the rheumatic poison.

At a meeting of the Massachusetts Medical Society, Dr. F. Taylor Fulton demonstrated that the muscular bundle of His is especially susceptible to the noxious action of the toxin of the rheumatic bacterium.[1] He explained that heart-block can be regarded as direct evidence of the involvement of the auriculo-ventricular conduction path. Heart-block may be the only sign of cardiac involvement, and indeed the rheumatic nature of the affection may be indicated by the extension of the conduction time, as shown by the electrocardiogram. He calls attention to the fact that the most striking effect of digitalis is seen in cases of auricular fibrillation. Digitalis slows the heart-rate by reducing the conductivity of the muscle fibres in the bundle of His. A damaged bundle is more than ordinarily susceptible to the blocking influence of digitalis. Since there is evidence that the bundle of His is at times permanently impaired in rheumatic infections, the action of digitalis in rheumatic lesions of the heart may be very marked, and consequently caution should be exercised, lest the slowing down due to the drug increases the heart-block due to the affection. Fulton's teaching is that in many cases of acute rheumatism the bacterial poison attacks the myocardium and produces damage without involving either the endocardium or the pericardium. The recognition of this cardiac affection at a stage when treatment may still bring about a restitution of normal conditions, can only be based on the lengthening of the *a-c* interval in the electrocardiographic record. Acute dilation of the cavities of the heart should be a signal to the practitioner to study the cardiac action by means of these records.

[1] *The Boston Medical and Sprgical Journal*, November 29, 1917.

The following have been nominated for election as members of the New South Wales Branch of the British Medical Association:—

Herbert James Orr, M.B., Mast. Surg., 1916, Univ. Sydney, Palace Street, Ashfield.

Grosvenor John Williams, M.B., Mast. Surg., 1916, Univ. Sydney, Royal Prince Alfred Hospital, Camperdown.

Hessel George Howell, M.B., 1917 (Univ. Sydney), 33 Arcadia Street, Glebe Point.

[1] *Bulletin of the Johns Hopkins Hospital*, December, 1917.

Public Health.

THE HEALTH OF AUSTRALIA.

Infective Diseases Notified in Australia during the Quarter ending September 30, 1917.

	New South Wales.		Victoria.		Queensland.		S. Australia.		W. Australia.		Tasmania.		Commonwealth.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.[4]	Dths.
Enteric Fever	61	10	38	5	30	4	13	4	18	2	26	6	186	31
Scarlatina	289	7	520	5	89	2	72	0	62	0	13	0	1045	14
Diphtheria	612	45	997	29	374	18	331	23	145	14	190	14	2649	135
Pulmonary Tuberculosis	[1]295	274	391	256	118	74	122	81	107	48	51	21	—	[2]756
Cerebro-spinal Meningitis	19	16	44	21	13	7	7	3	3	2	3	1	89	50
Poliomyelitis	0	0	4	1	1	2	0	1	0	1	0	1	5	6
Malaria	4	1	0	0	15	10	0	0	1	2	0	0	20	[3]14
Puerperal Fever	—	33	0	13	4	13	8	5	0	5	7	4	—	73
Septicæmia	—	13	0	11	—	4	—	0	[5]13	1	—	0	—	29
Bilharziosis	—	0	—	0	—	0	0	0	1	0	1	0	—	0
Morbilli	—	1	0	4	—	5	30	0	—	1	—	0	—	11
Pertussis	—	23	0	12	—	1	164	2	—	1	—	3	—	42
Ophthalmia Neonatorum	—	0	0	0	—	0	—	0	1	0	0	0	—	0
Erysipelas	—	9	0	2	40	3	37	2	15	0	—	0	—	16
Beri-Beri	—	1	—	0	—	1	—	0	2	10	—	0	—	13
Ankylostomiasis	—	0	—	0	9	0	—	0	—	0	—	0	—	0
Variola	54	0	0	0	0	0	0	0	0	0	0	0	54	0
Anthrax	—	—	0	—	—	—	0	—	2	—	—	—	2	—
Favus	—	—	—	—	—	—	36	—	—	—	—	—	36	—

[1] Notifiable only in portion of State.
[2] Including two deaths in the Northern Territory.
[3] Including one death in the Northern Territory.
[4] The total number of cases notified is not given of those diseases which are not notifiable in all the States.
[5] From the returns it is not clear how many of the septicæmia cases were puerperal.

NEW SOUTH WALES.

The following notifications have been received by the Department of Public Works, New South Wales, during the week ending January 19, 1918:—

	Metropolitan Combined District.		Hunter River Combined District.		Rest of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Enteric Fever	8	0	4	0	17	2	29	2
Scarlatina	12	0	0	0	7	0	19	0
Diphtheria	46	3	3	0	40	1	89	4
C'bro-Spl. Menin.	0	0	1	0	1	1	2	1
Poliomyelitis	1	0	0	0	0	0	1	0
*Pul. Tuberculosis	28	8	0	0	0	0	28	8

* Notifiable only in the Metropolitan and Hunter River Districts, and, since October 2, 1916, in the Blue Mountain Shire and Katoomba Municipality.

VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending January 20, 1918:—

	Metropolitan.		Rest of State.		Total.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Diphtheria	35	1	27	0	62	1
Scarlatina	15	0	7	0	22	0
Enteric Fever	0	0	11	1	11	1
Pulmonary Tuberculosis	14	5	6	0	20	5
C'bro-spinal Meningitis	1	—	1	—	2	—
Poliomyelitis	3	—	2	—	5	—

SOUTH AUSTRALIA.

The following notifications have been received by the Central Board of Health, Adelaide, during the week ending January 12, 1918:—

	Adelaide.		Rest of State.		Totals.	
	Cs.	Dths.	Cs.	Dths.	Cs.	Dths.
Diphtheria	7	0	9	1	16	1
Pul. Tuberculosis	7	1	9	8	16	9
Pertussis	0	0	6	0	6	0
Morbilli	0	0	4	0	4	0
Enteric Fever	1	0	3	0	4	0
Scarlatina	0	0	3	0	3	0
C'bro-Spl. Meningitis	0	1	0	0	0	1

QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending January 12, 1918:—

Disease.	No. of Cases.
Pulmonary Tuberculosis	21
Diphtheria	31
Enteric Fever	29
Erysipelas	5
Scarlatina	8
Cerebro-spinal Meningitis	2
Ankylostomiasis	1

WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the four weeks ending January 12, ~~1918~~:—

	Metropolitan. Cases.	Rest of State. Cases.	Totals. Cases.
Enteric Fever	21	12	33
Diphtheria	13	28	41
Scarlatina	20	9	29
Pulmonary Tuberculosis	23	2	25
Erysipelas	6	1	7
Beri-Beri	10	1	11
Malaria	1	0	1
Septicæmia	0	1	1
Hæmaturia	0	1	1

INSPECTION OF FACTORIES IN SOUTH AUSTRALIA.

The Chief Inspector of Factories of South Australia, in dealing with the various matters entrusted to his care, in his annual report for the year 1916, announces that the number of accidents in factories was 116, as compared with 121 in 1915. There were 52 accidents in metal factories, 7 in printing houses, 23 in wood-working factories and 34 in miscellaneous factories. Three were fatal. It appears that industrial poisoning is not included under the term factory accidents. The interests of the workers are not satisfied by a mere tabulation of accidents to limbs and by the provision of guards on machinery. The question of factory hygiene is an important one, and a report from a medical officer should be attached to the report of the Chief Inspector, so that the public might be reassured that the health of the worker is being looked after by a competent individual and his interests safeguarded.

Abstracts from Current Medical Literature.

THERAPEUTICS.

(38) Autoserum Treatment of Chorea.

E. M. Tarr (*Northwest Medicine*, October, 1917) has treated 14 patients suffering from chorea with the autoserum treatment devised by Goodman. The technique adopted was as follows. The presence of tuberculosis or syphilis was excluded. The patient was kept at rest in bed for several days to permit all drugs in the body to be eliminated. Forty cubic centimetres of blood were withdrawn from the veins of the arm. The serum separated after coagulation, was obtained with the aid of the centrifuge. The serum was kept upon ice until ready for use. Lumbar puncture was performed and 15 c.cm. to 20 c.cm. cerebro-spinal fluid were removed. The serum was warmed to body temperature and slowly injected into the spinal canal. Ten to fifteen minutes were occupied by the injection. The patient remained flat on the back for one hour after the injection. The author describes certain apparatus which are useful in taking the blood and making the injections. The chorea disappeared in 11 of the 14 patients. Two patients showed improvement, while one patient was not benefited. The number of injections given was 23, the greatest number given to a single patient being three. The patients varied in age from five to 16 years. Cure was effected in 48 hours to 96 hours after the injection. The author lays emphasis on the fact that acute cases can be cured before cardiac lesions develope. The treatment is, in the author's opinion, simple and no more dangerous than lumbar puncture. It requires no elaborate outfit, and can be done in the patient's home. Cure is expedited by placing the patient in a quiet room and alone. The exclusion of visitors for 43 hours is beneficial. The use of a fluid diet diminished the nausea and mild vomiting which may follow the injection.

(39) Action of Drugs on Heart.

E. McCartney and F. Ranson have tried to ascertain whether the pharmacological action of adrenalin, agaricin, veratrine, caffeine, saponine and the glucosides in digitalis upon the heart can be brought about in the absence of calcium (*Journ. Physiology*, September, 1917). They have carried out their investigation on the frog's heart perfused *in situ*, the apparatus being arranged that none of the perfused fluid returns through the heart. The liquid used for perfusion has been Ringer's solution, modified by the omission of the lime salt and by the addition of varying amounts of sodium oxalate or sodium citrate. The oxalate as it penetrates the cardiac muscle will precipitate any ionizable calcium as an insoluble salt. The citrate will form a compound which does not ionize with the calcium in the heart muscle. When the perfusion fluid is passed through the heart, the fluid depresses the heart action and the effect is observed on the graphic record of the cardiac contraction. If ordinary Ringer's solution replaces the modified liquid, the heart resumes its normal beat. The addition of adrenalin or agaricin to the modified Ringer's fluid leads to the production of the characteristic effect of the drug, but the onset of the pharmacological action is delayed sometimes for several minutes. Caffeine, dissolved in the modified Ringer's solution, has exactly similar action as when dissolved in ordinary Ringer's solution. There is rise of tone and increase in the length of systole, followed later by slowing in the rate. The depressant action of the lime-free liquid is observed with weaker solutions of caffeine. The presence of oxalate or citrate in the solution does not prevent the characteristic action of digitalis or strophanthus. The absence of calcium at first leads to some depression of cardiac action, but the effect of the digitalis eventually masks this action. If ordinary Ringer's solution is passed through the heart fed for some time with the modified solution containing digitalis, the effect of the digitalis on the heart is greatly accentuated and, though no digitalis is present in the perfusing liquid, the systole rapidly lengthens and the heart not infrequently stops suddenly in the systolic state. The effect of veratrine is not observed, when veratrine is added to the modified fluid. If, however, after some minutes perfusion, ordinary Ringer's solution without veratrine is passed through the heart, the characteristic action of veratrine is developed.

(40) Emetin Derivatives.

F. L. Pyman and C. M. Wenyon have tested the amœbacidal action of some of the alkaloids associated with emetin in ipecacuanha and of certain derivatives of emetin (*Journ. Pharm. and Exper. Therapeutics*, October, 1917). It seemed possible to them that some of these substances might have a greater toxicity for amœbœ relatively to human tissues than is the case with emetin. They hoped also that a study of the toxicity and of the chemical constitution of these bodies might afford information as to what chemical groups confer enhanced amœbacidal activity. They have examined ten substances by adding them to media on which amœbæ have been sown. The amount of growth in five or six days has been utilized for the comparison. The substances can be divided into three groups according to their amœbacidal action. The salts of emetin, cephælin, methyl-emetin, methyl-cephælin and methyl-emetin-methine are approximately equally amœbacidal. The salts of rubremetin and noremetin are inferior in amœbacidal action to those of the first group, and the salts of psychotrine are much inferior to those of the second group. The study of the chemical constitution has shown that the toxicity does not depend on the number of phenolic hydroxyl groups or on the extent to which these groups are methylated.

(41) Poisoning by Tri-nitro-toluene.

T. F. Harrington describes four fatal cases of poisoning by the fumes of tri-nitro-toluene in factories in Massachussetts, and gives histories of seven other cases in which the patient recovered (*Boston Med. and Surg. Journ.*, December, 1917). Since November, 1915, seventeen cases of poisoning have been reported from the factories devoted to the manufacture of high explosives. Tri-nitro-toluene causes destruction of erythrocytes, while the liberated hæmoglobin is, in part, converted into met-hæmoglobin. As a consequence of these changes the blood becomes incapable of taking up the normal amount of oxygen. The unoxygenated blood sets up irritation of the central nervous system. The lack of oxygen induces dyspnœa, air hunger, nausea, giddiness and, in severe poisoning, unconsciousness, lividity and asphyxia. In the fatal cases the patient became giddy, dazed and nauseated as a result of exposure to the poisonous gas. After some hours of apparent recovery symptoms recurred and the patient became comatose before death. One patient developed œdema of the lungs. Autopsy revealed extensive destruction of the red blood corpuscles with intense congestion of the viscera. The symptoms were similar among the patients who recovered, but convalescence was protracted.

(42) Heiser's Treatment of Leprosy.

H. S. Coghill has treated seven patients in Nigeria with the oil-mixture used by Heiser in cases of leprosy (*Annals Trop. Med. and Parasitology*, August, 1917). The mixture consisted of chaulmoogra oil, 60 c.cm., camphorated oil, 60 c.cm. and resorcin 0.24 gm. The mixture was sterilized by boiling. The injections were given intramuscularly into the buttocks. One dose was given weekly, commencing with 2 c.cm. and increasing to 8 c.cm. in each dose. After this dose had been reached, 6 c.cm. were given twice a week. The doses were well tolerated and all the patients responded to the treatment. The most rapid effect was the healing of ulcers, many of them large and deep and of years' duration. Softening and later absorption of nodules, fading of macules and return of sensation were also noticed. Descriptions are given of seven selected cases. Photographs are given as evidence of the changes observed.

UROLOGY.

(43) Prostatectomy.

Victor Pauchet (*Urolog. and Cutan. Review*, September, 1917) gives an account of the results of prostatectomy in 400 consecutive cases in his clinic at Amiens in France. The first hundred operations yielded a mortality of

10%, the second hundred, one of 8.1%, the third, one of 6.5%, and the fourth, one of 4%. He maintains that the better results were due to better preparation and after-care, and to improved technique. Worse cases were submitted to operation than formerly. Before operation was carried out, the renal function was tested by the estimation of Ambard's constant and of the elimination of methylene blue. An attempt was made to get rid of the toxins and urea accumulated in the blood before operation. Patients were given plenty of water to drink with bicarbonate of soda; a diet consisting largely or exclusively of fruit, cereals, potatoes without salt and green vegetables was prescribed; massage was employed and respiratory gymnastics. When the hypertrophy of the prostate is associated with an over-distended bladder and there is polyuria and incontinence, or when the bladder is infected, or when there is marked renal insufficiency, or when, after acute retention, a false passage has been created, or when the condition is complicated by cardiac insufficiency, diabetes, obesity, eczema, etc., the two-stage operation is performed. The author describes, both by letter-press and by illustrations, the various technical details of the prostatectomy. He proceeds to give an account of four methods of local anæsthesia which he has found of value for the operation. The first is described by peri-prostatic anæsthesia by the transvesical route. In this, the abdominal wall is infiltrated for the suprapubic incision, and the anæsthetic for the prostate is injected through the bladder and its mucosa into the gland itself. About 150 c.cm. of solution is required. The second method is described as peri-prostatic anæsthesia by the perineal route. By this method the needle is inserted through the perineum into the prostate under guidance of the finger in the rectum. From 50 to 80 c.cm. of the solution is required. The sacral method by the anterior route is carried out with the patient in the dorso-sacral position, with the thighs flexed on the abdomen. The needle should be 9 cm. long, and should impinge on the external border of the sacrum, which is about 2 cm. from the median line. The point of the needle is then carried up until it reaches the anterior surface of the bone. When at the level of the fifth sacral foramen, 5 c.cm. of the fluid are injected. The needle is then pushed to the level of the fourth foramen, then to the level of the third and then to the level of the second. At each stage, 5 c.cm. are injected. The needle is then changed for one 12 cm. in length. The point is inserted about 10 cm., and is directed slightly forward. It should then reach the first sacral foramen, when 10 c.cm. are injected. The procedure is repeated on the other side. The last method is described as the trans-sacral method. For its performance, four lines are marked. The first is a median line; the second is a horizontal line, corresponding to the two posterior inferior iliac spines; the third is parallel to the second, and lies at the level of the sacro-coccygal articulation; the fourth line is a finger's breadth external to the median line and parallel to it. From these lines, the five foramina may be localized. The needle is inserted into each, and 5 c.cm. of novocaine solution are injected 1 cm. beyond the upper foramina and 0.5 cm. beyond the lower. On the second side it is unnecessary to inject more than two of the foramina.

(44) Tubercle Bacilli in the Urine.

In an article on the relation of medical tuberculosis to the urine, Victor C. Pedersen (*Urol. and Cutan. Review*, September, 1917) makes an attempt to determine the condition of the urinary system, including the presence or absence of tubercle bacilli in the urine, in cases of tuberculosis of the lung and of acute miliary tuberculosis. Considerable difficulty has been encountered in carrying out this study, since the majority of consumptive patients resist all elaborate investigation of the urinary system, when no symptoms of its derangement are present. He obtained data concerning 14 patients in hospital. In two cases a positive Wassermann reaction was obtained. In both tubercle bacilli were present in the sputum. Tubercule bacilli were not found in the urine of any of the patients, either by direct search or by inoculation into guinea-pigs. The author, however, points out that the observations were not conducted frequently enough to be of great practical value. A trace of albumin was found in the urine of one patient, and a few hyaline casts in three. In two cases the cystoscopic appearances were highly suggestive of early tubercular lesions. The author gives a brief résumé of the literature, and arrives at the conclusion that in many cases of pulmonary tuberculosis the bacilli pass out into the urine, without producing subjective or objective symptoms. He suggests that the urine contains bacilli at irregular intervals, and that this fact renders their detection difficult.

(45) Renal Tuberculosis.

Louis Frank and L. W. Frank record the history of two patients who were suffering from tubercular disease of the kidney (*Urol. and Cutan Review*, September, 1917). In the first case, the diagnosis depended on the history of sharp colicky pains in the region of the right kidney and along the course of the right ureter, on the detection of a soft tumour on palpation, and on the demonstration of an irregular shadow in the situation of the right kidney on X-ray examination. Cystoscopic examination revealed a complete closure of the right ureteral orifice. The diagnosis was confirmed after removal of the organ. In the second case, there was pollakiuria with pain in the bladder. The urine contained much pus and albumin. Tested by the phenolsulphonephthalein reaction, the right kidney was found to be functionally impaired. The cystoscope revealed an œdematous granular area in the neighbourhood of the ureteral orifice, with several punched-out ulcers and some small tubercles. The diagnosis was confirmed by operation. In discussing the cases, the authors point out that the commonest early symptom is referred to the bladder. Vesical tuberculosis is always, or nearly always, a secondary infection. They hold that an ascending renal affection occurs only in cases of bladder obstruction, and add that even this is questionable. When tubercle bacilli are present in large numbers in the urine collected by the ureteral catheter, the diagnosis is at once obvious. On the other hand, unless some expedient, such as that suggested by Morton, be adopted, the guinea-pig test is too slow to be of practical value. Morton determined that when a guinea-pig was subjected to the action of Roentgen rays, the result of intraperitoneal injections of tubercle bacilli became evident after eight or ten days. They point out that in certain cases valuable information can be obtained from examination with X-rays. They presence of renal or ureteral calculi can be demonstrated by these means. When the renal shadow is not clear, a collargol or thorium injection can be carried out.

(46) Transperitoneal Approach to the Kidney.

Carl Beck discusses the transperitoneal approach to the kidney (*Surg. Clinics*, Chicago, August, 1917). In infected cases, the extra-peritoneal approach by means of a posterior oblique incision remains the method of choice, firstly because there is no danger of contaminating the peritoneum, and secondly because in the dorsal position, it offers the most dependent drainage. The disadvantage of this method, however, is found in the difficulty of reaching the blood vessels where there is a kidney tumour, especially in the presence of an infiltrated pedicle. The hæmorrhage produced by the separation of the tumour from behind is often dangerous. This also applies to cases in which abscesses have been drained, the so-called "dead kidney," and to chronic tuberculous kidneys where adhesions are dense. Beck recommends the transperitoneal incision for these as being safe, bloodless, and easy. A long incision in the nipple line from the rib border opens the peritoneal cavity. The ascending colon is found and the general peritoneal cavity walled off. The posterior peritoneum is incised and the surgeon dissects towards the middle line until the renal vessels are found close to their origin from the aorta and *vena cava*. These vessels are grasped with three forceps and cut, two forceps being left on the proximal side. A ligature replaces the more proximal of these two. The separation of the kidney mass from its capsule then becomes almost a bloodless operation. If drainage be considered necessary, the abdominal wall may be perforated through the retro-peritoneal space.

THE OPHTHALMOLOGICAL SOCIETY OF NEW SOUTH WALES.

A meeting of the Ophthalmological Society of New South Wales was held at the Sydney Hospital on November 7, 1917, Dr. E. A. D'Ombrain, the President, in the chair.

Dr. Temple Smith showed a woman whom he had had under observation for two and a half years under suspicion of glaucoma. She had turned up again a few months ago, with normal tension in the right eye, and a +2 tension in the left. This was confirmed with the tonometer. The vision of the right eye was $^{6}/_{12}$, and of the left $^{6}/_{18}$, but in this eye there were 5 diopters of astigmatism. Her fields were entire, and there was no scotoma. Her discs were a good colour and not cupped, although from the history, they might have been regarded as slightly "cuppy." He did not propose to operate while the vision and fields remained as they were; but sought the opinions of those present on this point.

Dr. Jones advised keeping the pupil small with myotics.

The opinion of the members was universally against operation.

Drs. Rutherford and Guy Antill Pockley thought that the fields should be watched carefully. The first indication that an operation was required, would probably be found in connexion with the fields.

Dr. D'Ombrain thought that there was a suggestion of cupping on the nasal side of the disc, though there was none on the temporal.

Dr. Temple Smith showed a case of glaucoma. Both eyes had been operated on by him by Foroni's method of sclerostomy, as described in the *British Journal of Ophthalmology*, of July, 1917. As contrasted with the classical operation of La Grange, with which it had much affinity, the absence of a critical moment during the operation was marked. The incisions were made from without inwards, instead of by cutting out, as in the former. As contrasted with trephining, which up to the present held the field as being the safest and best operation for chronic glaucoma, the following points were made.

It was recognized that to deal with the iris, a trephine hole of not less than 1.5 mm. in diameter was necessary. Owing to the small distance between the limbus and the site of the ciliary body, if one made certain of not encroaching on the latter, it was necessary to encroach on the cornea by stripping off its conjunctival layer for a millimetre or more. This inevitably resulted in the vesicular scar, with all its attendant dangers and discomforts. That this disability was recognized was shown by the fact that several Sydney surgeons, Dr. MacLeod in particular, were trying the Van Lint flap, which gave a flatter and more fleshy covering. The chief point he wished to make for this new procedure was that it enabled the surgeon to open the anterior chamber well in front of the ciliary body and yet behind the limbus, thereby avoiding the necessity for a covering of conjunctiva alone, which was undoubtedly what conduced to the objectionable vesicular scar. The piece of sclera excised, while it was a millimetre or less in width, could be made as long as one wished, up to four or five millimetres. He thought that the occasional prolonged absence of the anterior chamber, which was met with after trephining, and which he was convinced was a cause of plastic transudates from iris and ciliary body, and retinal detachment, both of which often nullified the result of the best executed operation, was less likely to occur with a flap-like opening than with a pit-like opening with vertical sides as in trephining.

He had found the operation easy of execution, the iris easily dealt with, and, while the result was no better than that from an ordinary normal trephining, it seemed to him that the disabilities, enumerated above, were less likely to occur than in either La Grange's operation or in trephining. While not wishing to dogmatize with an experience of two operations only, he felt he could recommend it as worth trying. Prolonged experience only could afford material for a true comparison.

Dr. Jones was glad that the case had been reported, because they had no operative measures which could be called at all a certain cure for glaucoma; and any new procedure was worthy of careful consideration. With regard to avoiding the vesicular scar so frequently occurring in trephining, he stated that he had seen a couple of very successful cases of trephining with the Van Lint flap, as performed by Dr. MacLeod. He also thought there might be a difficulty in making the second incision if the anterior chamber was opened by the first one; but Dr. Temple Smith assured him that although he had opened the anterior chamber by accident with the first incision, he had experienced no difficulty with the second one.

Dr. Halliday thought that the number of operations devised with the idea of forming a filtering scar was rather a contrary indication to the reliability of a filtering scar causing improvement. He had observed that the exponents of filtering scar operations all sooner or later combined the production of the filtering scar with an iridectomy and found this more successful than the filtering scar *per se*. He was inclined to think that the greatest good was derived from the iridectomy.

Dr. Rutherford said he was present when the operation was done. He thought it a very promising operation, but the technique necessitated a surgeon of considerable dexterity and experience.

Dr. Guy Antill Pockley welcomed the operation as a possible useful addition to the number of operations for glaucoma which were available for selection in different cases. He thought that care should be exercised when undertaking a new operation, to think out, as far as possible, all ways in which the operation might fail, as well as all ways in which it might be more beneficial than existing methods. Compared with trephining, which he thought, after the various swings of the pendulum had settled down to normal, was the most universal operation performed in chronic glaucoma, he could see no reason why one could reasonably expect the anterior chamber to reform more rapidly than after trephining. In his experience with a sharp trephine and a thoroughly cocainized eye, he experienced no difficulty of "crisis," which had been referred to, and he thought trephining was as free from danger as the new operation in this respect. With regard to trephining he had found in only a very minute percentage of cases, was the 1.5 millimetre trephine hole blocked by any agency, such as entanglement of iris fragments, organized hæmorrhage, organized vitreous, inflammatory exudate, or actual proliferation of tissue. Of those cases in which trephining failed, by far the majority of them did so through a very slow but firm attachment of the conjunctiva to the sclera, which usually occurred six to twelve months after the operation. In many cases which had been followed for various periods up to over four years, a perfect filtering trephine hole and a nice thick conjunctival covering, under which the fluid drained in a very diffuse manner, were seen. He had come to the conclusion that these were the cases in which there was a thick conjunctiva, and at the same time a good thickness of loose sub-conjunctival tissue. The cases in which he thought trephining liable to fail at a later date after operation, were those with a thin conjunctiva with little noticeable sub-conjunctival trabeculæ. In these cases, though the conjunctiva was boggy around the whole circumference of the cornea for a considerable time after the operation, there seemed to be an irritant action caused by the leaking aqueous, and the œdematous area gradually became constricted until sometimes six to twelve months after operation the conjunctiva had apparently sealed down right up to the edge of the trephine hole, and though the trephine hole could be plainly seen to be patent, no drainage occurred and the rise of tension recurred. He did not see any hope of this difficulty being overcome by the new operation, as the drainage occurred in exactly the same way. There was one respect in which he thought the new operation would have a great advantage over trephining. He personally never adopted the technique which Elliot insisted upon, of removing the disc from the trephine hole and performing the iridectomy with one snip of the scissors. He could conceive of no useful object being attained by so doing and he thought one could remove the disc more completely by dealing with it first. The iris was then dealt with frequently by using two pairs of iris forceps; an attempt was made to drag out the iris on one side first; this was then snipped through carefully with the scissors

held as in the old operation for iridectomy for glaucoma. Traction was then put on the free end of iris, and it was cut through on the other side of the trephine hole in the same way. He did this with the object of combining the advantages of a filtration scar with whatever advantages were securable by a large iridectomy and dragging the iris from the angle of the anterior chamber, as was previously taught to be the classical thing to do in operating for glaucoma. This was a much easier procedure than one would imagine in cases where the iris was not too atrophic; but with an absolutely inelastic, atrophic iris, it could not be done through a trephine hole. He thought that in Foroni's operation one could make the incisions long enough to enable one to deal in this way with the iris in these cases also.

Dr. D'Ombrain thought the case a most interesting exhibit. He agreed with Dr. Guy Antill Pockley that in a large number of cases failure was due to a slow binding down of the conjunctiva, frequently without the formation of any vesicle at all. In his experience also he had no fear whatever of any dangerous period of "crisis." He was strongly of opinion that so far trephining held out a greater prospect of success than any other operation for chronic glaucoma, and he was hopeful that the new operation might prove equally or possibly even more successful. He, too, had seen a number of cases which had been operated on by Dr. MacLeod by his method of covering the trephine hole with the Van Lint flap, which gave a beautiful result. He thought that by adopting this method one covered the trephine hole with a thicker portion of the conjunctiva than that which naturally lay over the site of the trephine hole. He thought there was no doubt that the conjunctiva at the limbus was very much thinner, and therefore in the ordinary trephine operation there was very much more likelihood of the formation of a vesicular scar than when the thicker portion of the conjunctiva was drawn over the hole by the Van Lint flap.

Dr. Halliday exhibited a case in a patient who had been sent to him by a practitioner, with a history of an attack of right-sided supraorbital *herpes necrogenica* some months before. There was much subsequent scarring, and when he saw the patient, there was complete ectropion of the right upper lid, the conjunctival surface of which was directed directly forwards. The cornea was left uncovered and in a very dangerous position from exposure. He made an incision the length of the lid and a few millimetres from the insertion of the lashes through the skin, and without difficulty drew the lid margin downwards, which proved that the contraction was only skin deep. He secured the margin of the upper lid to the skin below the margin of the lower lid by three sutures. There was then an oval area uncovered by skin measuring in its greatest diameter about three centimetres. He covered this with a Thiersch graft taken from the thigh of the patient. The graft healed by first intention, with the very nice results shown, though he feared the possibility of further contraction if the nerve lesion persisted. Fortunately the condition of the skin of the head generally appeared to be rapidly improving.

Dr. D'Ombrain was very interested, particularly as he had been trying to cure contracted sockets by the insertion of Thiersch graft in the orbit. He thought it was much more difficult to get a graft to take on the concave inner surface than the convex outer surface of a lid. The accumulation of secretion tended to prevent the graft lying in close contact with the lid.

Dr. Jones said he had previously seen the patient at Moorecliff. He thought the graft had taken wonderfully well, as when he saw the patient the skin appeared to be too septic to admit of successful grafting. He had had a very similar case a few years before, though the cause of the trouble was different. In his case a man had been dragged by a horse, and owing to abrasions cicatrization caused the eyelashes to be matted up in the eyebrows. He adopted a similar technique, with the exception that he used a full thickness of skin for his graft, instead of a Thiersch graft. The result obtained was excellent.

The following motion was proposed by Dr. D'Ombrain and seconded by Dr. Temple Smith, and was carried unanimously:—

> That the members be asked to make a note of and record any case in which they can prove that an optician has exceeded the limit of his calling to the detriment of a patient.

Obituary.

JOHN NEVILLE GRIFFITHS.

In our issue of December 15, 1917, it was our painful duty to record the death of John Neville Griffiths. He was killed while serving in the Royal Army Medical Corps on November 30, 1917, the day on which he completed his third year of service.

John Neville Griffiths was born in the year 1881. He was educated in Sydney at the Hayfield School, the Cooerwull Academy and the Sydney Grammar School. He had a distinguished school career, during the course of which he secured a number of prizes at the annual examinations. In 1897 he was awarded the University Prize for General Proficiency in the Junior Public Examination, together with medals for excellence in several subjects. In 1899 he passed the Senior Public Examination with distinction, and again carried off several medals. He matriculated in the same year with honours in Latin and Greek, and obtained a *proxime accessit* to the Barker Scholarship for mathematics. As a crown to his school career he gained the Senior Knox Prize and Salting Exhibition. He entered the Medical School at the University of Sydney in 1900, and was in residence at St. Andrew's College throughout his course. He held several College scholarships. In 1905 he graduated in medicine.

Apart from very marked scholastic ability, he was a good "citizen" at the University, in the best sense of the term. He was as well known in the social and athletic life of the University as in its class-rooms. He held office on the committee of a number of clubs and societies, in particular the Undergraduates' Association, the Medical Association and the Tennis Club. He represented the University at tennis in the "A" grade competitions for several years. At one time he held the Queensland Tennis Championship for singles. From first to last his name stood for all that was clean, honourable and public spirited in University life, and he enjoyed to a marked degree the respect and affection of all who knew him. He was of a somewhat quiet disposition and the majority of his closest friends were men who were interested in their work.

After graduating he accepted the position of Resident Medical Officer at the Women's Hospital in Crown Street. Later he signed on with a shipping company as ship's doctor. At this time he decided to continue his studies in Germany, and consequently he went to Berlin, where he became proficient in the German tongue and took up the study of phonetics. About 1908 he returned to Australia and practised for a time at Killara, in the neighbourhood of Sydney. In 1911 he was again in Europe, and he seized this opportunity of obtaining the Diploma of Public Health of the Royal Colleges of Physicians and Surgeons. He took a special interest in the problems connected with tuberculosis, and while in London he associated himself with Dr. Camac Wilkinson, at times acting as his *locum tenens*. A few days after war broke out he offered his services to the War Office, and was first employed in England and later was sent to a general military hospital at St. Omer. He was invalided to England on account of an attack said to have been trench fever, and after his recovery was kept at one of the camps in the old country. His next position was attached to an aerodrome in France, where he found the work most absorbing. It is probable that he was with a heavy battery at the time of his death. He worked at many casualty clearing stations, advanced dressing stations, etc., during his period of service in France.

From his letters it would appear that he never found war work congenial and that he signed on year after year from a deep sense of duty. He was not of an adventurous disposition, and consequently the nation is under a deeper debt

than it would be had he found the work more to his liking. He was married a year before his death. He has lost one brother in the war, while both his other brothers are serving at the present time.

FRANCIS WILSON.

It is with much regret that we have to record the death of Dr. Francis Wilson, which took place on January 12, 1918.

Francis Wilson was born at Darlington, in Durham, England. He was educated at the Durham College, and studied medicine at Edinburgh. He took the diplomas of the Royal Colleges of Physicians and Surgeons of Edinburgh in 1877-1878, and, five years later, obtained the Diploma of Public Health at Edinburgh. In 1883 he arrived in New South Wales and practised at Muswellbrook. In 1898 he proceeded to Brisbane and acted as *locum tenens* to the late Dr. W. S. Byrne. Shortly after, he started practice at Boonah, but eventually returned to Dr. Byrne, and practised in partnership with him until 1913. In March, 1914, he entered the Royal Australian Naval Brigade and, at the time of his death, had the rank of Staff-Surgeon. For several years he held the position of Honorary Surgeon at the Lady Lavington Hospital for Women and a similar position at the Mater Misericordiæ Public Hospital. He was a very capable surgeon, and was doing excellent work at both Institutions. A painful cardiac affection interfered with his activity for a time and eventually compelled him to relinquish his hospital duties. He bore his long and trying illness with wonderful fortitude, to the admiration of all who knew him. He was a man who had travelled much, who had read much and who had thought much. He was quiet and unostentatious, a thorough gentleman in the highest sense of the term, and a straight and honourable practitioner. These qualities impressed themselves on his patients, colleagues and friends, of whom he had a very large number. In his younger days he was a great carpenter, and in his house are many treasured examples of his skilful work.

He was accorded a naval funeral, and the large gathering of leading citizens and members of the medical profession bore witness to the high esteem in which he was held. His widow and two daughters have received numerous tokens of sympathy.

THE CARE OF THE DEAF AND THE BLIND.

There are few institutions to which it is given to convert tragedy into happiness, which can compare with the homes and schools for the deaf and dumb and the blind. The fate of afflicted children unless trained by special methods, is necessarily a hard one, and yet when these little ones are placed under the care of expert teachers, they soon learn to take their places in the community as useful members. We have before us the annual report of the New South Wales Institution for the Deaf and Dumb and the Blind for the year ending September 30, 1917. From this excellent record we learn that 19 deaf and dumb children and three blind children were admitted during the twelve months. During the same period 20 deaf and dumb children and five blind ones were discharged. The total number of deaf and dumb inmates at the close of the year was 90 and of blind children 28. In addition, there is one clever girl of 16 years, Alice Betteridge, who is both deaf and blind. Of Miss Reid, under whose wonderful tuition this child's mind has been awakened, and she has been enabled to communicate with the outer world, nothing that we can say can do her justice. Dr. George E. Rennie, in his annual medical report, informs the public that the general health of the children is good, and that with very few exceptions they have shown much improvement in their physical condition. He points out that the number of cases of mental enfeeblement is less than formerly. This is evidence of the process of weeding out of undesirable pupils and of greater care in the selection of those who are admitted. His expert knowledge in this direction is a valuable asset to the Institution which should not be used as an asylum for feeble-minded children. He speaks in terms of high praise of the care and attention given to their chargelings by the Superintendent and his staff.

Notwithstanding the fact that the importance of the work carried out in this institution is universally recognized, we regret to find that the income falls short of the minimum requirements by some £1,237. The expenditure amounted to £8,701, and the income to £7,463. There is a debt of £5,091 on the Building Fund. Those who have it within their power to assist this deserving charity, cannot do better than to contribute to the amount raised yearly in annual subscriptions. It is to be noted that while the public contributed £2,340 last year, the Government subsidy amounted to only £450.

Special Correspondence.

(By our Special Correspondent.)

LONDON LETTER.

Scientific Research and Industrial Development.

The Second Report of the Privy Council Committee for Scientific and Industrial Research was issued at the end of August.

Capital, management, and science must, the Committee point out, have suitable representation on the Council of an Association for Research, but they believe "that greater success and a wider scope of action will be obtained if provision is made also for the inclusion of labour." In most cases, it is added, skilled labour only will be concerned.

It is intended that the research associations should include as many of the firms in each industry as possible, but it may be found necessary to sectionalize industries, at the same time securing co-operation between the different sections.

It is reported that associations are in prospect in the woollen and worsted industries, and the Irish flax spinners and weavers have decided to take the same step, also photographic manufacturers and electrical engineering firms.

The British Society of Aircraft Constructors, in conjunction with the Aeronautical Society, have the matter under consideration; the Scottish shipbuilding and steel industries are moving; and the Committee hope that it may be possible to establish an Association for Research into the non-ferrous alloys in the near future.

They understand that the British iron-puddlers and the Diesel engine-makers have independently established research organizations. Coal-mining industry is interested, "but it will necessarily take time to organize this huge industry on a national basis."

Researches have been conducted into the fire-resisting properties of different kinds of concrete, and into glass, optical and other. With regard to glass, a great deal has already been done, and three completely new kinds of optical glass have been discovered by Professor Jackson, who has been investigating this subject with the assistance of the Glass Research Committee of the Institute of Chemistry.

A research on light alloys (aluminium, zinc and copper) will, it is stated, be of the utmost importance for the future of aeronautics. A new hard porcelain, from purely British materials, has been produced, and researches into the recovery of tin are expected to save the Cornish tin industry something like £30,000 a year.

Juvenile Delinquencies.

Mr. Cecil Chapman, the Southwark Police Magistrate, delivered recently an interesting address on the subject of juvenile delinquency.

The increase of crime among the juvenile portion of the population since the beginning of the war is a question of seriousness and importance. Mr. Chapman pointed out that the growth of youthful misdemeanours had been so striking during the past three years that it had startled the people of this country into feverish anxiety as to how the problem was to be faced and dealt with. He said that among the causes of the increase due directly to the war were the absence of the father, the elder brother or brothers, of many school teachers and of many club leaders and scoutmasters, the closing of many schools and public parks, the artificial darkness in the streets, which had led to an in-

crease of 50% of crime, the greater occupation of the mothers, the increase in the wages that children were earning, cinematograph shows in which mischievous scenes were depicted, and lastly, covering all the causes of the increase, the general excitement and demoralization due to war talk and war conditions both among adults and children. He thought that the majority of these offences were remediable. What children were calling for was light, they wanted to escape from the monotony of family life Very much could be done to change the lives of the people without revolution. There were the precept system and games; greater use should be made of the Boy Scouts and Girl Guides movement; children should not be kept from school in order to earn wages. the continuation schools must be increased both in number and the period at which they could be attended. He thought that some blame should be attached to the parents for not associating themselves more closely with the schools in which their children were educated. They did not realize half enough the extent to which juvenile delinquencies were due to physical or psychical deficiencies; these should be looked after by doctors rather than by policemen.

The Employment of Children Under Twelve for Farm Work.

The Home Office has sent recently the following communication to the Clerks to the Justices throughout the Kingdom:—

"Representations have been made to the Secretary of State that education authorities in agricultural districts are meeting with difficulties in enforcing the obligation of school attendance in the case of young children. While local enducation authorities in many agricultural areas have, with the concurrence of the Board of Education, released from attendance at school those children over twelve whose services are urgently needed for agricultural work, it has not been considered necessary or desirable that younger children should be taken from school for that purpose. Several cases have, however, been brought to the notice of the Secretary of State by the Board of Education where children under the age of twelve are being kept away from school in order to be employed on farms; and when such cases have been brought before the justices, it has been urged that in the present emergency there is a 'reasonable excuse' within the meaning of the Education Acts for the absence of the children from school.

"The Board of Agriculture, who have full knowledge of the present need of additional labour in agriculture, have been consulted by the Board of Education, and their opinion has been given as follows: 'The Board concurs with the Board of Education in strongly deprecating the release of children under the age of twelve from attendance at school for employment in agriculture, believing that at no time in the history of the country was the education of the rising generation of more importance.'

"The Secretary of State will be glad if you will bring this opinion to the notice of the justices, who will, he is sure, bear it in mind in dealing with any cases of the kind that may come before them."

The Rhodes Scholarships.

The Earl of Rosebery and Sir Lewis Michell have recently resigned their position as trustees under the will of the late Mr. Cecil Rhodes. The late Earl Grey had also resigned his trusteeship shortly before his death. Mr. Otto Beit, Lord Lovat, and Mr. Rudyard Kipling have accepted the position of trustees, the other trustees being Lord Milner and Sir Starr Jameson.

The trustees have now definitely constituted the Scholarship Fund contemplated by Mr. Rhodes in his will, and have decided to allot the four new scholarships formerly held by Germans to the provinces of Alberta and Saskatchewan, to the Transvaal, to the Orange Free State, and alternately to the towns of Kimberley and Port Elizabeth, in the Cape Province. As Alberta and Saskatchewan have hitherto had one scholarship between them, the effect of this decision will be that each of these provinces will now have a scholarship.

After careful consideration and consultation with the Presidents of a number of the Universities affected, the trustees have decided not to make any appointments to scholarships this year either in the United States or in any part of the British Empire, although the qualifying examinations in the United States will be held as already arranged. This decision is based upon the fact that, as all candidates must be men of military age, it would not be in accordance with the spirit of the testator's design if young men who first responded to the call of patriotism, were to be penalized for having done so. Any candidate who is eligible this year, will be equally qualified for election next year.

Correspondence.

THE MENACE OF THE BIRTH-RATE.

Sir,—We are given many remedies in your columns for the declining birth-rate. May I suggest in sobriety that all such remedies are useless indeed unless the people as individuals in the nation learn God's great lesson, *viz.*, "I am my brother's keeper." May the medical profession lead the nation in such a solemn individual matter is my earnest prayer.

Yours, etc.,
F. TIPPING.

Kaniva, Victoria,
22nd January, 1918.

LATIN AS A COMPULSORY SUBJECT.

Sir,—The number of necessary subjects that have to be studied for the medical profession is now so great and the knowledge thereof required is so extensive that there is a danger of the individual being overburdened or of the knowledge acquired being superficial and merely crammed for examination purposes. It is advisable to periodically review the subjects required and eliminate such as are not absolutely necessary.

The General Medical Council in Great Britain has ceased to require that Latin be a compulsory subject in the preliminary examination for registration as a medical student.

Five of the English universities, including London, have also ceased to require Latin for the matriculation, and I understand the University of New Zealand has done the same.

We have, therefore, the highest authority for the opinion that a knowledge of Latin is not necessary for the medical profession. The only portals to the medical profession in Australia are the Universities of Sydney, Melbourne and Adelaide. In all of these Latin is still required in the matriculation examination for entrance to the medical school, though no longer necessary for science and engineering.

I would suggest that the British Medical Association, as representing the medical profession, should approach these universities with the view of eliminating the subject of Latin as compulsory for entrance to the Medical School, and so bring their school into line with those of Science and Engineering. In lieu thereof both physics and chemistry could be made compulsory for matriculation, and so help to relieve the burden of the first year.

I may add that the representatives of the leading Universities on the General Medical Council voted in favour of the elimination of Latin, considering the knowledge of the language obtained by the majority of students being so superficial and perfunctory as to be neither useful in itself nor as a means of general education.

Yours, etc.,
EDGAR A. FALKNER, M.B., Dun.

Toowoomba, Queensland,
January 24, 1918.

Books Received.

THE PRACTICAL MEDICINE SERIES, under the general editorial of Charles L. Mix., A.M., M.D.; Volume VII., OBSTETRICS, edited by Joseph B. De Lee, A.M., M.D., with the collaboration of Eugene Cary, B.S., M.D.; 1917 Series. Chicago: The Year Book Publishers. Melbourne: Stirling & Co. Crown 8vo., pp. 224, illustrated. Price, 6s.

THE PRACTICAL MEDICINE SERIES, under the general editorial charge of Charles L. Mix., A.M., M.D.; Volume VIII., PHARMACOLOGY AND THERAPEUTICS, edited by Bernard Fantus, M.S., M.D., AND PREVENTIVE MEDICINE, edited by Wm. A. Evans, M.S., M.D., LL.D., P.H.D.; 1917 Series. Chicago: The Year Book Publishers. Melbourne: Stirling & Co. Crown 8vo., pp. 384, illustrated. Price 7s.

Proceedings of the Australian Medical Boards.

VICTORIA.

The following have been registered, under the provisions of Part I. of the "Medical Act, 1915," as duly qualified medical practitioners:—

James Riddell Bell, "Sanquhar," Kooyong Road, Caulfield, M.B., *et.* Ch.B., Melb., 1917.
Harold Gillbee Brown, "Clonaig," North Road, Brighton North, M.B., *et.* Ch.B., Melb., 1917.
James Leslie Diggle, Euroa, M.B., *et.*, Ch.B., Melb., 1917.
Collier Dinwoodie, Post Office, Kyneton, M.B., *et.* Ch.B., Melb., 1917.
Harold George Downer, No. 11 A.G. Hospital, Caulfield, M.B., *et.* Ch.B., Melb., 1917.
Nellie Winifred Cranwell Haynes, 337 Church Street, Richmond, M.B. *et* Ch.B., Melb., 1917.
Erwin Kelmar, "Casa d'Espana," Rathdown Street, Carlton, M.B., *et.* Ch.B., Melb., 1917.
Ellen Mary Kent Loubet, "Oakhurst," Clendon Road, Toorak, M.B., *et.* Ch. B., Melb., 1917.
Noel Armstrong Maclure, "Yaamba," Mont Albert Road, Balwyn, M.B., *et.* Ch.B., Melb., 1917.

The following names of deceased practitioners have been removed from the Register:—

James Frederick Harris.
Thomas Francis Hayes.
Charles Werner Gunst.
Norman John Bullen.
William Weston Hearne.
John Gladstone Mackenzie.
Edward Ronald Welch.
Harold Oscar Teague.
Maldwyn Leslie Williams.
Melville Rule Hughes.
James Joachim Nicholas.
Eric John Kerr.
George Stephenson Elliott.
George Annand.

Medical Appointments.

Dr. Frank Oliver Stokes (B.M.A.) has been appointed Government Medical Officer at Taree, New South Wales.

Dr. Henry Rogerson (B.M.A.) has been appointed Acting Medical Superintendent at the Hospital for the Insane at Kew, during the temporary absence of Dr. Morris F. H. Gamble (B.M.A.).

Dr. Albert Curtis (B.M.A.) has been appointed Acting Medical Superintendent at the Receiving House, Balaarat, during the temporary absence of Dr. Walter H. Barker (B.M.A.).

The following have been appointed Medical Officers of Health in the State of Victoria for the Shires mentioned:—

Dr. Samuel Grenville Skewes in the Shire of Bright.
Dr. Francis William Cave (B.M.A.) in the Shire of Kowree.
Dr. David Tyrrell Keyes (B.M.A.) in the Shire of Shepparton.

Dr. James Eli Webb (B.M.A.) has resigned his position as Medical Officer of the Department of Public Instruction of New South Wales.

Medical Appointments.

IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
VICTORIA. (Hon. Sec., Medical Society Hall, East Melbourne.)	All Friendly Society Lodges, Institutes, Medical Dispensaries and other contract practice. Australian Prudential Association Proprietary, Limited. National Provident Association. Life Insurance Company of Australia Limited. Mutual National Provident Club.
QUEENSLAND. (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Medical Officers to the Selwyn Hospital, North Queensland. Brisbane United Friendly Society Institute.
SOUTH AUSTRALIA. (Hon. Sec., 3 North Terrace, Adelaide.)	The F.S. Medical Assoc., Incorp., Adelaide. Contract Practice, Appointments at Renmark.
WESTERN AUSTRALIA. (Hon. Sec., Health Department, Perth.)	All Contract Practice Appointments in Western Australia.
NEW SOUTH WALES. (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmain United F.S. Dispensary. Canterbury United F.S. Dispensary. Leichhardt and Petersham Dispensary. M.U. Oddfellows' Med. Inst., Elizabeth Street, Sydney. Marrickville United F.S. Dispensary. N.S.W. Ambulance and Transport Brigade. North Sydney United F.S. People's Prudential Benefit Society. Phœnix Mutual Provident Society. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Parramatta, Auburn and Lidcombe. Newcastle Collieries — Killingworth, Seaham Nos. 1 and 2, West Wallsend.
TASMANIA. (Hon. Sec., Belrive, Tasmania.)	Medical Officers in all State-aided Hospitals in Tasmania.
NEW ZEALAND: WELLINGTON DIVISION. (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, N.Z.

Diary for the Month.

Feb. 6.—Federal Committee of the B.M.A. in Australia, at Melbourne.
Feb. 6.—Vic. Branch, B.M.A., Monthly Meeting; Presentation of Balance Sheet for 1917.
Feb. 12.—Tas. Branch, B.M.A., Council and Branch.
Feb. 12.—N.S.W. Branch, B.M.A., Ethics Committee.
Feb. 14.—Vic. Branch, B.M.A., Council.
Feb. 15.—Q. Branch, B.M.A., Council.
Feb. 19.—N.S.W. Branch, B.M.A., Executive and Finance Committee.
Feb. 26.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.
Feb. 27.—Vic. Branch, B.MA., Council.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.